Panasonic

TX–36PG50
TX–32PG50

Colour Television

(U.K. Standard)

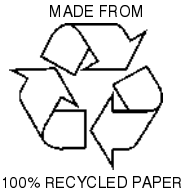
[tau]
FLAT
DIGITAL

Operating Instructions

Welcome

Dear Panasonic Customer,
We hope that you have many years of enjoyment from your new TV. The ***Quick Start Guide*** section at the beginning of this instruction book will allow you to use the TV as quickly as possible. We recommend that you then read the complete instruction book, and keep it to refer to as you explore the range of advanced features that this TV offers.

This TV has a low power consumption making it very cost effective to run. Also, when in ***Standby*** mode the power consumption is merely 2.8W.



This instruction book is produced using recycled paper, made from 100% Post–consumer waste pulp. De–inked without bleaching. Free from optical brightening agents (OBA).

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- This TV set is designed to operate on 220-240V, 50Hz A.C.
- To prevent damage which might result in electric shock or fire, do not expose this TV set to rain or excessive moisture. This TV must not be exposed to dripping or splashing water and objects filled with liquid, such as vases, must not be placed on top of or above the TV.
- **WARNING : HIGH VOLTAGE !!!**
  Do not remove the rear cover as live parts are accessible when it is removed. There are no user serviceable parts inside.
- **TV Games / Home Computers**
  Extended use of TV games or home computers with any television set can cause a permanent 'shadow' on the screen. This type of irreversible picture tube damage, can be limited by observing the following points:
  - Reduce the brightness and contrast levels to a minimum viewing level.
  - Do not operate the television set for a continuous period of time while using TV games or home computers.
  - This type of picture tube damage, is not an operating defect, and as such is not covered by the Panasonic warranty.
- The On/Off switch on this model does not fully disconnect the TV from the mains supply. Remove the mains plug from the wall socket when the TV set is not used for a prolonged period of time.

  Note:
  - If the set is not switched off when the TV station stops transmitting, it will automatically go to standby mode after 30 minutes. This function will not operate when the TV is in AV mode.
- **Cabinet and picture tube care**
  Remove the mains plug from the wall socket. The cabinet and picture tube can be cleaned with a soft cloth moistened with mild detergent and water. Do not use solutions containing benzol or petroleum. TV sets can produce static electricity, care must be taken whenever touching the TV screen.
- Adequate ventilation is essential to prevent failure of electrical components, we recommend that a gap of at least 5cm is left all around this television receiver even when it is placed inside a cabinet or between shelves.
- Avoid exposing the TV set to direct sunlight and other sources of heat.

FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY

This appliance is supplied with a fitted three pin mains plug for your safety and convenience. A 5 amp fuse is fitted in this plug. If the fuse is replaced then the replacement fuse must be 5 amp rated and should be approved by ASTA or BSI to BS1362.

Check for the ASTA mark or the BSI mark on the body of the fuse.

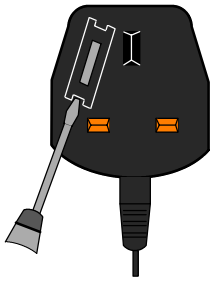
If the fitted plug has a removable fuse cover you must ensure that it is refitted when the fuse is replaced. If you lose the fuse cover the plug must not be used until a replacement cover is obtained. Replacement fuse covers can be purchased through your local Panasonic dealer.

The plug fitted to this appliance incorporates a mains filter circuit. If this is removed or replaced with a non-filtered plug this television will no longer meet the European standards for Electromagnetic Compatibility (EMC). If the fitted plug is unsuitable for the socket outlet in your home an appropriate adapter should be used.

Nonetheless, if the fitted plug is replaced, the fuse should be taken out and the cut-off plug disposed of safely. There is danger of severe electrical shock if the cut off plug is inserted into any 13 amp socket.

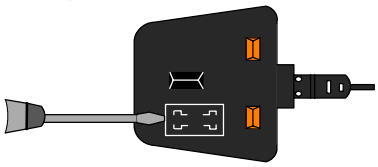
If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

Example 1



How to replace the fuse (for plug type shown in example 1) :
Lift out the removable fuse compartment with a screwdriver and replace the fuse, then refit securely into the mains plug (see example 1).

Example 2



How to replace the fuse (for plug type shown in example 2) :
Lift open the fuse compartment, in the mains plug, with a screwdriver, and replace the fuse, then press the fuse cover down securely (see example 2).

IMPORTANT :- The wires in the mains lead of this appliance are coloured in accordance with the following code :-

BLUE : NEUTRAL BROWN : LIVE

As the colours of the wires in the mains lead of this appliance may not correspond to the markings identifying the terminals in your plug, proceed as follows :-

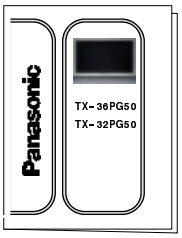
1. The BLUE wire must be connected to the terminal marked 'N' or coloured black.
2. The BROWN wire must be connected to the terminal marked 'L' or coloured red.

IMPORTANT NOTE : Under no circumstances should either of these wires be connected to the Earth terminal of the three pin plug, marked with the letter 'E' or the earth symbol.

Accessories

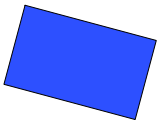
Check that you have the accessories and items shown ✓

☐ Operating Instruction book
TQB8E3045



☐ Remote Control Transmitter
EUR511224

☐ Batteries for the Remote Control Transmitter.
(2 x R6 (UM3) size)

☐  CRT Guarantee

☐ TV Guarantee

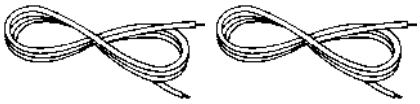
☐ Questionnaire

☐ TS-36PG50 / TS–32PG50
(Video cabinet / Speaker pack), comprising :

Video cabinet

Centre speaker
(built–in)

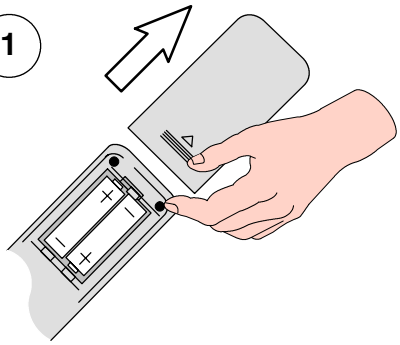
Speaker cables (x2)
(10 metres each)



Rear surround speakers (x2)

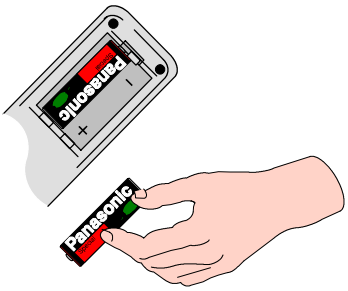
Fitting remote control batteries

1



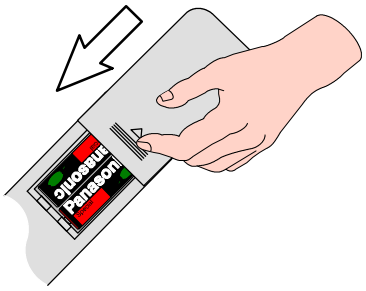
Slide off the battery cover

2



Insert batteries - note correct polarity (+ and -)

3



Replace the cover

- Make sure that the batteries are fitted the correct way round.
- Do not mix old batteries with new batteries. Remove old, exhausted batteries immediately.
- Do not mix different battery types, i.e. Alkaline and Manganese or use rechargeable (Ni–Cad) batteries.

Basic controls: front panel and remote control

Press here and open flap to expose TV controls, front AV3 and headphone terminals

MAINS Power
On / ***Off*** switch

Red light indicates ***Standby*** mode. When using the remote control, indicates the TV has received a command

STR (Normalisation store)
Used to store tuning and other function settings

F (Function select)
Displays the On Screen Display functions, use repeatedly to select from the available functions – ***Volume***, ***Contrast***, ***Brightness***, ***Colour***, ***Sharpness***, ***Tint*** (in ***NTSC*** mode), ***Bass***, ***Treble***, ***Balance***, ***Tuning*** and ***Geomagnetic Correction***

TV/***AV*** switch (see page 36)

Increases or decreases the programme position by one. When a function is already displayed, press to increase or decrease the selected function. When in ***Standby*** mode, switches TV ***On***

RCA Audio/Video sockets (page 36)

S–VHS socket (see page 36)

Headphone socket (see page 36)

Standby On / ***Off*** switch
Switches TV ***On*** or ***Off*** standby

Menu buttons
Press to access the ***PICTURE***, ***SOUND*** and ***SETUP*** menus (see page 13)

Status button
Press to display programme position, programme name, channel number, time, ***NICAM*** mode, ***ASPECT*** mode, ***Scan*** mode and programme table

Teletext buttons (see page 31)

Direct TV Record button (see page 28)

Surround On / ***Off*** (see page 34)

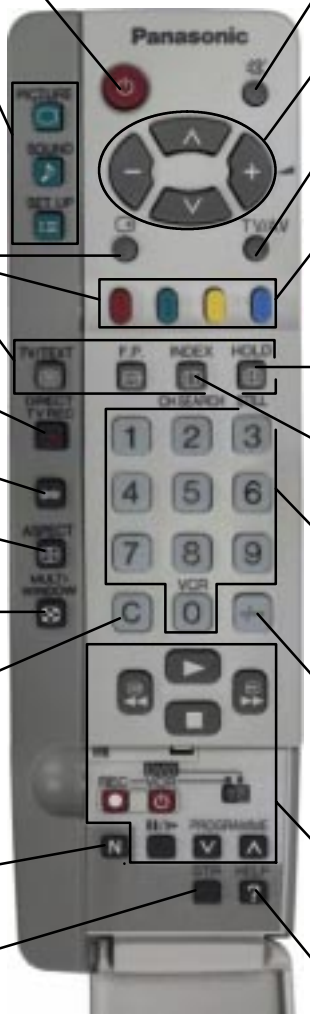
ASPECT control button (see page 24)

MULTI WINDOW button (see page 26)

Direct channel access
During normal TV viewing or when in the ***Tuning***, ***Programme edit*** or ***Manual tuning*** menus, press and then enter channel number using the numeric buttons

N (Normalise) button
Resets all settings to their default levels

Stores some current settings as the normalised settings in ***PICTURE*** and ***SOUND*** menus. Stores some settings in ***Tuning*** and ***Programme edit*** menus, confirms start of ***Auto setup***



Sound mute ***On*** / ***Off***

Cursor buttons to make selections and adjustments

Switch between viewing TV or AV input (see page 36)

Coloured buttons used for
ASPECT functions (see page 24)
Programme edit functions (see page 18)
Teletext functions (see page 31)
AV selection (see page 36)
MULTI WINDOW functions (see page 26)

STILL button (see page 27)

Channel search button (see page 27)

Programme / channel change buttons (0–9) and Teletext page buttons (see page 31)
When in ***Standby*** mode, switches TV ***On***

Programme position for selection of two digit programmes (10–99) using numeric buttons

VCR / ***DVD*** buttons (see page 30)

The ***HELP*** button provides a demonstration of On Screen Display menus

Connection and setting up options

- If connecting the TV using an RF cable only, see below.
- If connecting the TV using Scart and RF cables, see page 7.
- If connecting the TV to a Q-Link (or Q-Link compatible) VCR, see page 7.
- If connecting the TV to a Q-Link (or Q-Link compatible) VCR and a satellite receiver, see page 8.

What is Q-Link?

Q-Link allows direct communication between the TV and a Q-Link (or Q-Link compatible) VCR, this will enable features such as downloading of tuning information from the TV to the VCR.
When using a "NEXTVIEWLINK" VCR the main features possible are the following :

- *Preset Download* Downloading of tuning information from the TV to the VCR.
- *Direct TV Record* For immediate recording of the current program (What You See Is What You Record).

When using a "Q-Link" VCR the main features possible are the following :

- *Preset Download* Downloading of tuning information from the TV to the VCR.
- *Direct TV Record* For immediate recording of the current program (What You See Is What You Record).
- *TV/VCR Auto Power On* When the VCR plays a tape the TV will automatically switch On and select the AV2 input.
- *VCR Auto Power Standby* When the TV is switched into Standby, the VCR will also switch into Standby.
- *VCR Image view On* If the TV is in Standby mode and the VCR sends a menu to be displayed on the TV screen (e.g. Main menu), the TV will automatically switch On and the menu will be displayed.

This TV will also communicate with other VCRs that bear the following logos :

- "DATA LOGIC" (a trademark of Metz Corporation).
- "Easy Link" (a trademark of Philips Corporation).
- "Megalogic" (a trademark of Grundig Corporation).
- "SMARTLINK" (a trademark of Sony Corporation).

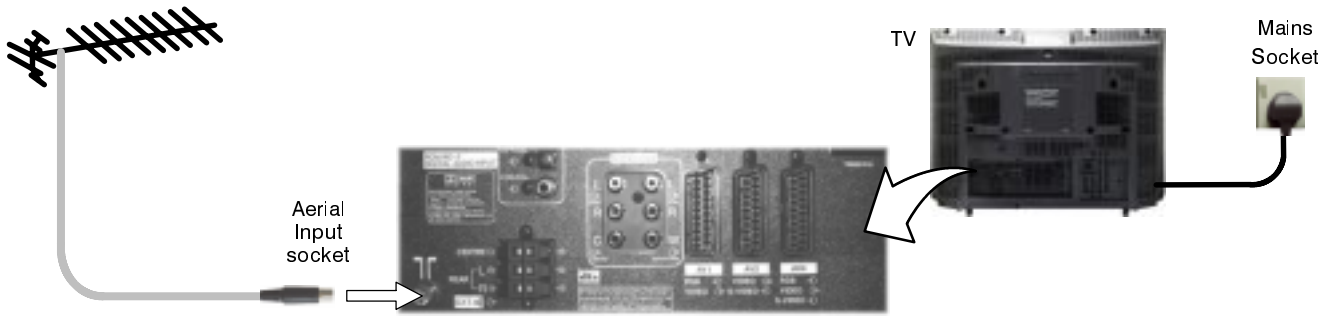
These VCRs may support some or all of the above functions. Refer to the VCR operating instruction book.

Further information on Q-Link can be found on page 28.
In order for Q-Link to function correctly, the Scart cables must be connected in a certain way, dependent on whether the TV is being connected to a VCR or to a VCR and Satellite Receiver.

Connection of TV using an RF cable only

RF connection

- Connect the RF cable into the TV Aerial socket (⊓).



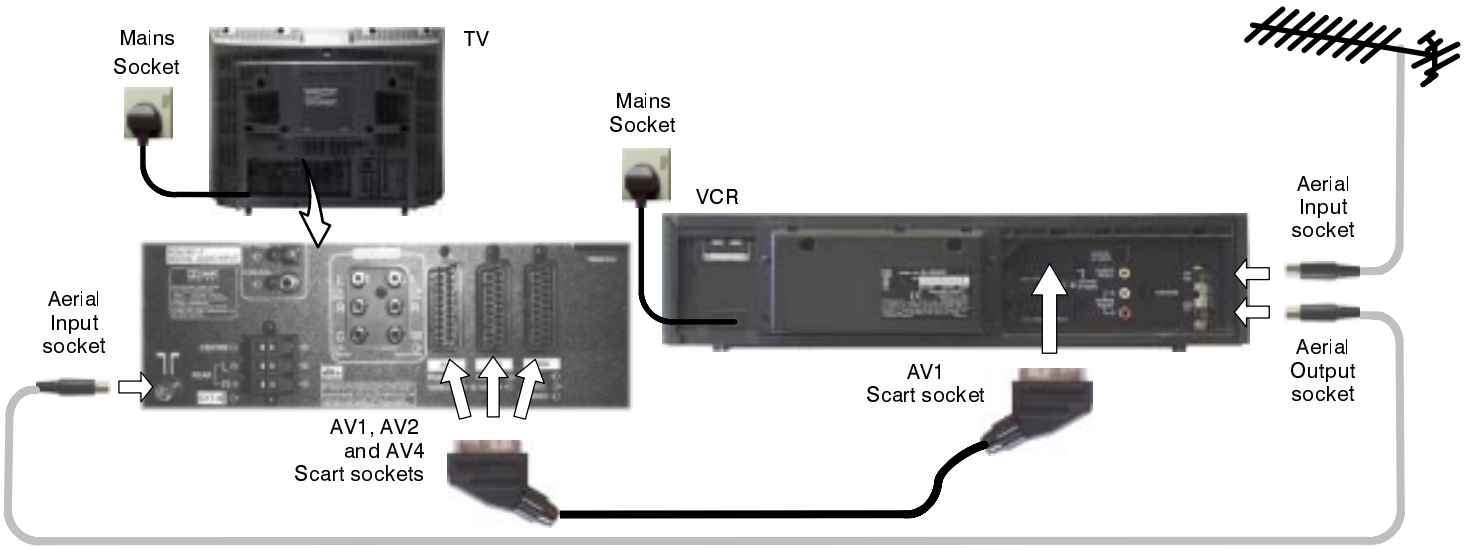
Connection of TV and VCR using Scart and RF cables

Scart connections

- The VCR can also be connected to the TV using a Scart cable if you are using a Scart equipped VCR.
- Use the TV's AV1 Scart socket for a VCR.
- Use the TV's AV2S or AV4S Scart socket for an S–Video VCR.

RF connection

- Connect the RF cable to the VCR Aerial In socket and an RF cable from the VCR Aerial Out socket to the TV Aerial socket (⊐|⊏).



Notes :

- Additional equipment and cables are not supplied.
- Further details of audio/ video connections can be found on pages 36 and 37.

Q–Link connection of TV and VCR using Scart and RF cables

Scart connection

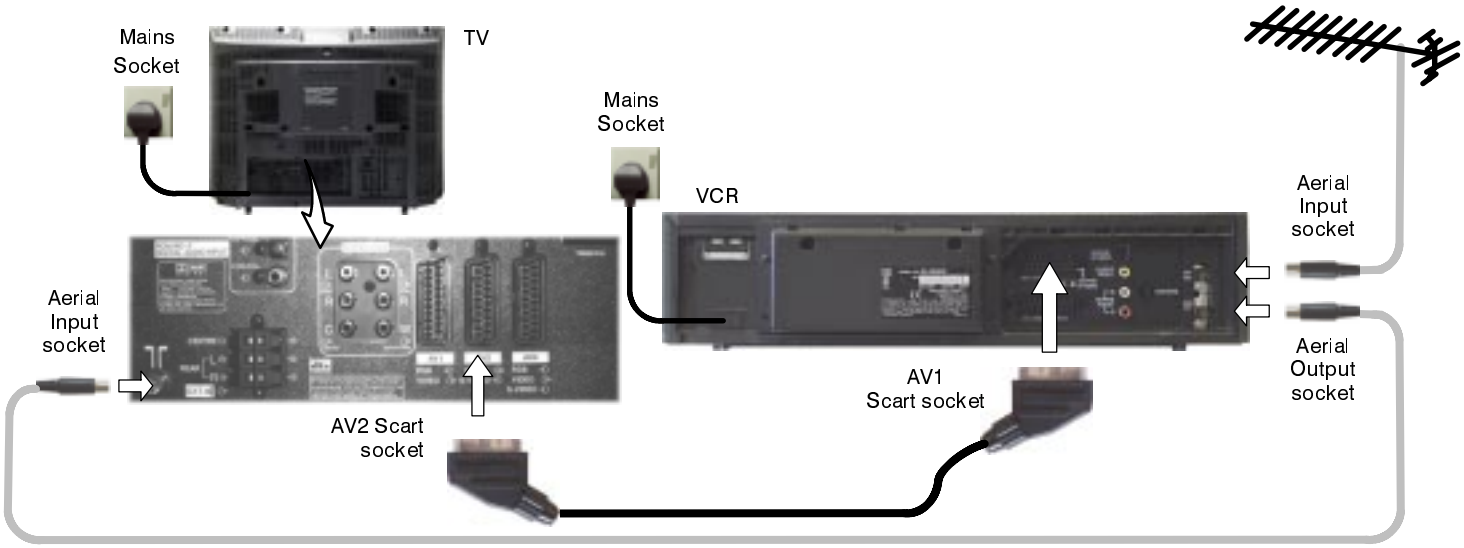
- The VCR must be connected to the AV2 Scart socket of this TV using a 'fully wired' Scart cable.

Note:

- If using a "Q-Link" VCR then the AV1 Scart of the VCR must be connected to the AV2 socket of the TV. If your VCR is not a "Q-Link" VCR, please consult your VCR operating instruction book.

RF connection

- Connect the RF cable to the VCR Aerial In socket and an RF cable from the VCR Aerial Out socket to the TV Aerial socket (⊐|⊏).



Notes:

- Additional equipment and cables are not supplied.
- Further details of audio/ video connections can be found on pages 36 and 37.
- Further information for VCR and Satellite Receiver installation with this TV can be found on page 29.

Q-Link connection of TV, VCR and Satellite using Scart and RF cables

For Q-Link to function correctly the TV, VCR and Satellite Receiver must be connected as shown in the diagram below.

Scart connections
'Fully wired' Scart cables should be used for all of the Scart connections.

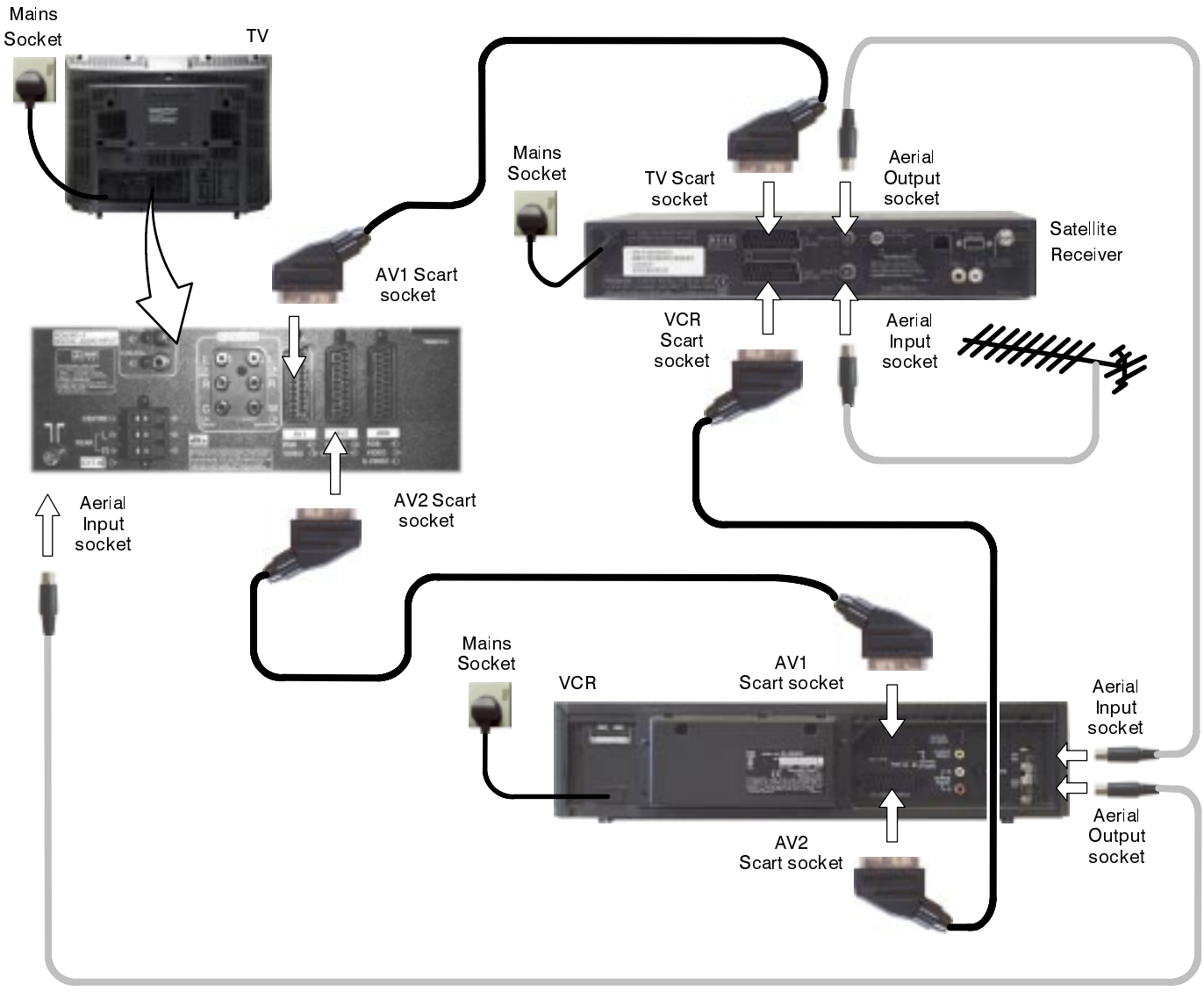
- The AV2 Scart of the VCR must be connected to the VCR socket of the Satellite Receiver.
- The TV Scart socket of the Satellite Receiver must be connected to the AV1 Scart socket of the TV.

Note:

- If using a "Q-Link" VCR then the AV1 Scart of the VCR must be connected to the AV2 socket of the TV. If your VCR is not a "Q-Link" VCR, please consult your VCR operating instruction book.

RF connections

- Connect an RF cable to the Aerial In socket of the Satellite Receiver.
- Connect an RF cable from the RF Out socket of the Satellite Receiver to the RF In socket of the VCR.
- Connect an RF cable from the RF Out socket of the VCR to the TV Aerial In socket (⊓⊓).



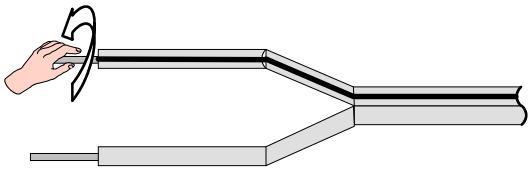
Notes:

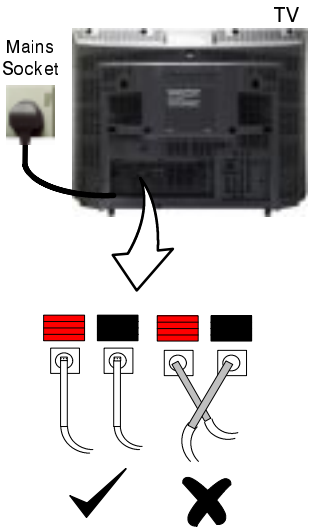
- Additional equipment and cables are not supplied.
- Further details of audio/ video connections can be found on pages 36 and 37.
- Further information for VCR and Satellite Receiver installation with this TV can be found on page 29.

Connecting external speakers

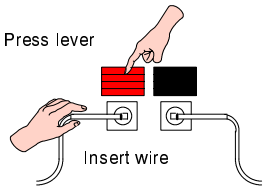
The following three steps allow you to connect the external rear left and right surround speakers and built–in centre speaker supplied. The TV must be switched ***Off*** before connecting external equipment.

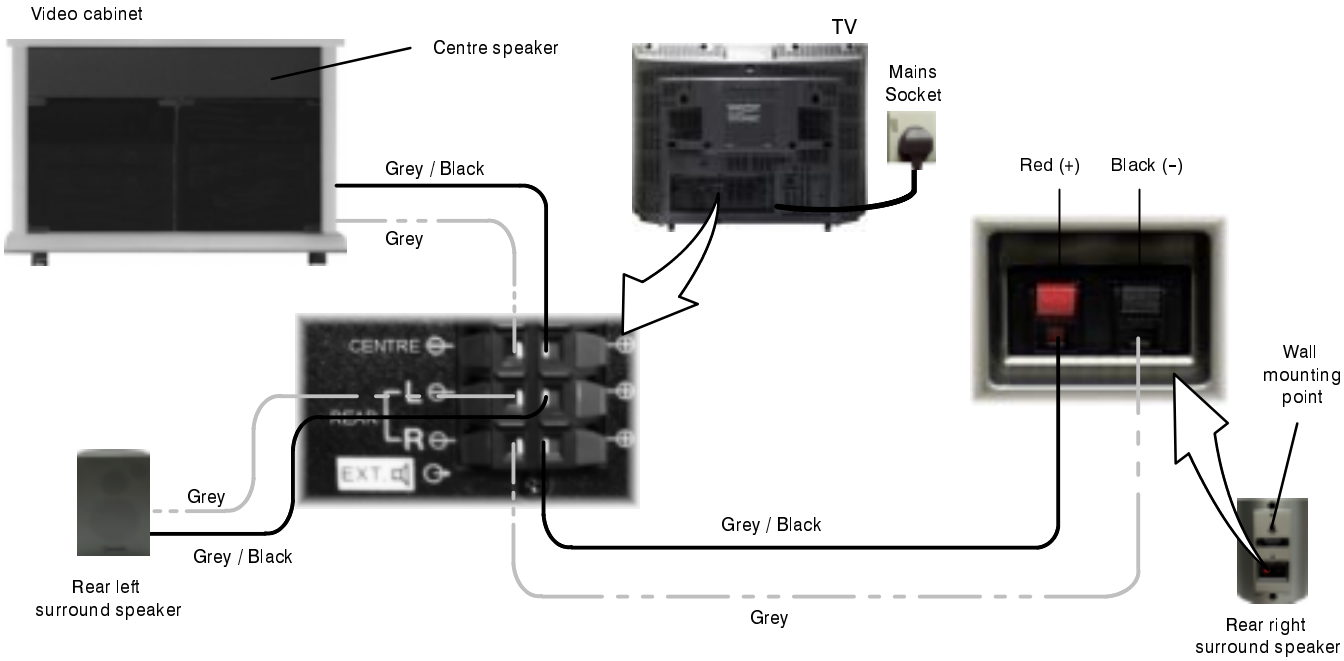
1 Twist the wire ends before inserting.



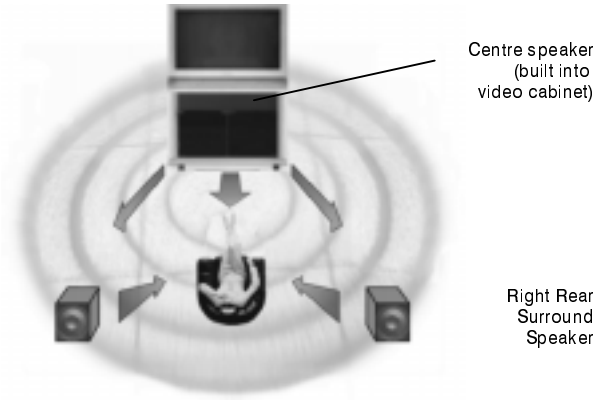


2 Insert into terminals. Ensure that bare speaker wires are not touching.



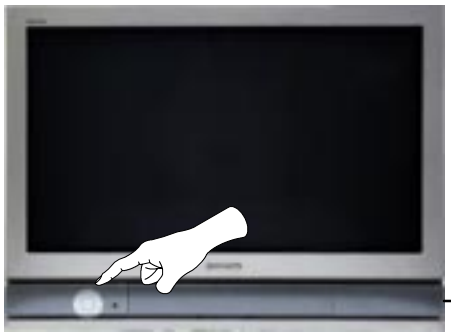


3 Position the speakers



4 If you wish to connect external amplifiers and additional external speakers, see pages 38 to 40.

5

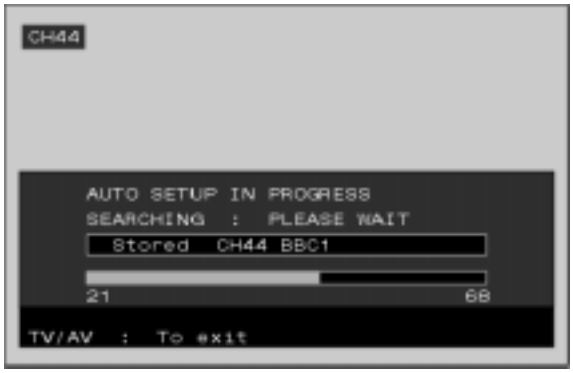


First, ensure that the VCR is in ***Standby*** mode.

Plug in TV and switch on.

Mains Socket

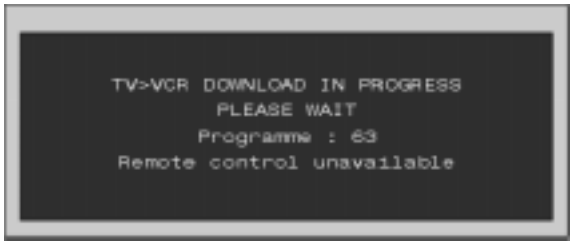
6



Programmes will appear immediately if your dealer has programmed the TV for you.

If the TV has not been programmed for you then ***Auto setup*** will begin, your stations will be located, sorted into order and stored ready for use.

7



TV to VCR download

If a Q-Link, NEXTVIEWLINK or compatible VCR has been connected to the AV2 socket before starting Step 1, programme information will be downloaded to the VCR.

Downloaded tuning data will match the television's.

Not all VCRs support this download of programme information, some may require to be started manually. Refer to the VCR operating instruction book.

If a VCR other than those described above has been connected, then there will be no download operation.

Notes :

If the VCR has not accepted download data from the TV, you may need to select the Download option from the VCR's menu system. Refer to the VCR operating instruction book.

If Q-Link is not operating correctly, check the following :

- The Scart cable is connected to the TV's AV2 Scart socket.
- The Scart cable is connected to the VCR's compatible (Q-Link, NEXTVIEWLINK or similar technology) Scart socket.
- The Scart cable is a "fully wired" type.

For further information on Q-Link and connecting equipment, see pages 28, 36 and 37.

- The sorted programme order depends upon the TV signal, the broadcasting system, and reception conditions. If the order is not to your preference it can be rearranged. Refer to the Programme edit menu - see page 18 for details.
- If you have an analogue satellite receiver, select 'SKY ONE' or 'SKY NEWS' on the receiver before starting Auto Setup. After Auto Setup is complete, the satellite position will be shown as 'SAT' in the channel listing to denote programmes from the satellite receiver.
- If you have a digital satellite receiver, you can start Auto setup with the receiver set to any channel. You will then have to manually name the 'SAT' position after Auto setup is complete. Refer to the Programme edit menu - see page 19 for details.

Prog. Position	All channels	No CH5	No CH5 / S4C	No CH4 / CH5	No S4C	No CH4 / S4C	No CH4 / S4C / CH5
1	BBC1	BBC1	BBC1	BBC1	BBC1	BBC1	BBC1
2	BBC2	BBC2	BBC2	BBC2	BBC2	BBC2	BBC2
3	ITV	ITV	ITV	ITV	ITV	ITV	ITV
4	CH4	CH4	CH4	S4C	CH4	CH5	SAT
5	S4C	S4C	SAT	SAT	CH5	SAT	◔
6	CH5	SAT	◔	◔	SAT	◔	◔
7	SAT	◔	◔	◔	◔	◔	◔

Note :
◔ The next available channel will appear, if no other stations are available then the Programme position will remain unused.

8

Owner ID
As an added feature, this TV has the option of entering a security code (Owner ID) and personal details into its memory, so that in the unfortunate event of theft it will help the police to trace the owner.

Enter required 4 digit Owner ID ***PIN NUMBER*** (using 0 to 9 on the remote control)

Press the ***TV/AV*** button at any time to exit the Owner ID feature without saving any information you may have entered. TV/AV

9

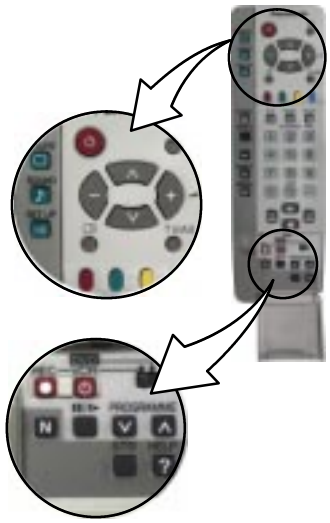
Enter ***NAME***, ***HOUSE NUMBER*** and ***POSTCODE***

If a 4 digit ***PIN NUMBER*** was entered above, you will be taken automatically to the ***NAME*** line

If not, move to the ***NAME*** line

Change character

Select character position



Repeat above until ***NAME***, ***HOUSE NUMBER*** and ***POSTCODE*** are entered

Press ***STR*** to store the details STR

Press ***STR*** again, when you are asked “Are you sure?” STR

For further information on Owner ID, including how to view the details you have stored, see page 23.
A space is provided on page 23 to write down your ***PIN NUMBER*** for future reference.

10

We recommend that as soon as you have stored ***Owner ID*** details (or have exited the feature), the picture controls are reset to normal viewing levels. To do this, press the ”***N***” button, found under the remote control’s pull down flap. N

11 ***Geomagnetic Correction (picture tilt)***

Slight tilting of the picture may be noticeable, the ***Geomagnetic Correction*** feature can be used to eliminate this, if necessary:

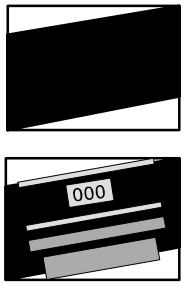
Ensure the ***Auto setup*** and ***Q–Link*** download procedures are complete. The screen should not be showing any On Screen Display menus.

Using the remote control keys indicated, access the ***Geomagnetic Correction*** menu option and follow the procedure below (for a full explanation of the On Screen Display menu system see page 13) :

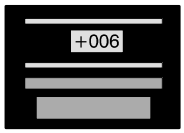
Press the ***SETUP*** menu button — SET UP

Move to the ***Geomagnetic*** menu option

Access the ***Geomagnetic*** menu. Horizontal guide bars and tilt adjustment indicator appear to help you eliminate any screen tilt



Adjust the picture tilt as necessary



Press the TV/AV button to exit the ***SETUP*** menu — TV/AV

12 If you do not wish to connect any external amplifiers and speakers at all, we recommend that you switch ***Surround*** sound ***Off.*** The sound output will then be two channel (ie: left and right) stereo or mono.
With the ***Surround*** feature switched off some additional features become available in the ***SOUND*** menu, see page 15.

Press the ***Surround*** button to switch between ***On*** and ***Off***

Note:

- Accessing the ***Surround*** menu (via the ***SOUND*** menu) automatically switches the ***Surround*** feature ***On.***

13 You are now ready to begin viewing programmes

The cursor controls provide the two basic functions:

Adjust Volume

Change Programme

Many features available on this TV can be accessed via the On Screen Display menu system. Use the remote control as shown below to access and adjust features as desired.

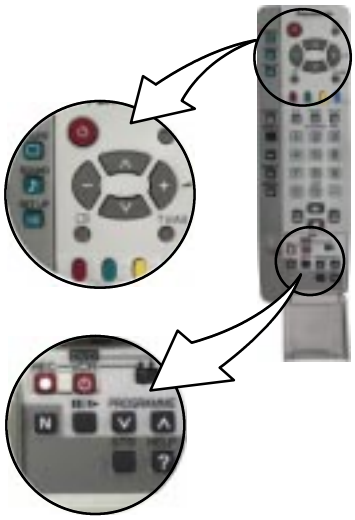
The ***PICTURE***, ***SOUND*** and ***SET UP*** buttons are used to open the main menus and also to return to the previous menu

The up and down cursor buttons are used to move the cursor up and down the menus

The left and right cursor buttons are used to access menus, adjust levels or to select from a range of options

The ***STR*** button is used with a number of features to store settings after adjustments have been made or options have been set

The ***TV/AV*** button is used to exit the menu system and return to the normal viewing screen

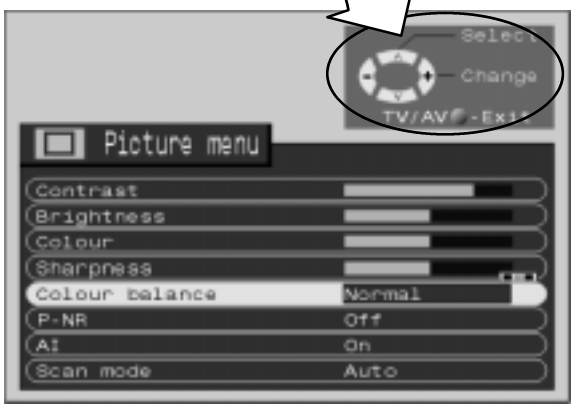


An On Screen Help box is displayed whenever a menu is displayed on the TV. This Help box indicates which keys on the remote control are used to navigate the menu shown, see above for descriptions of button functions.

Note:

- The Help box is not shown in the menu pictures in this instruction book due to space limitations.

ON SCREEN HELP
'Instructions' box



The ***HELP*** button runs a demonstration of the menus available.

Press the ***HELP*** button and select one of the options

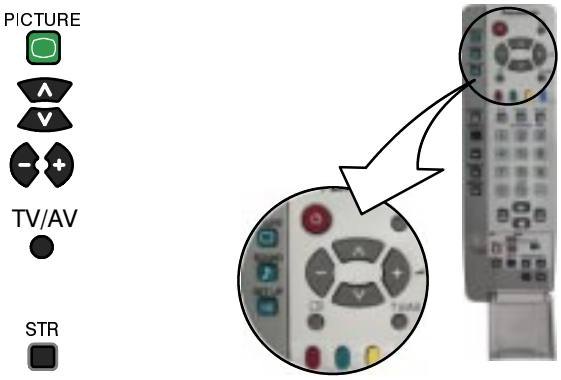
Press the ***PICTURE*** menu button

Move to chosen menu option

Adjust chosen option

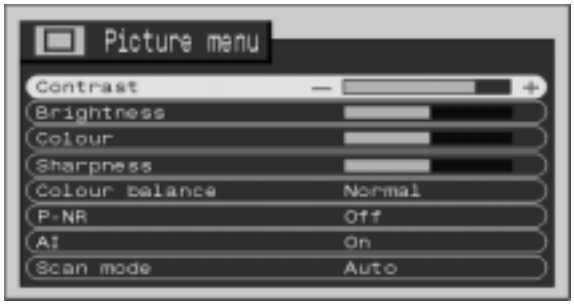
Press the ***TV/AV*** button at any time to go back to watching TV

Pressing the ***STR*** button after having adjusted a feature will store the setting as the default (replacing the factory setting).



Contrast
Brightness
Colour
Sharpness

Increase or decrease the levels of these options according to your personal preference.

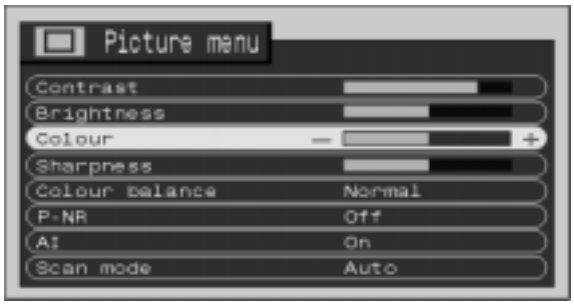


Tint

With an NTSC signal source connected to the TV this menu option is available; the option allows adjustment of the picture hue to suit your taste.

Colour balance

Allows you to set the overall colour tone of the picture. Choose from ***Cool***, ***Normal*** and ***Warm***.



P–NR

Automatically reduces unwanted picture noise.

AI

Automatically analyses the incoming picture and processes it to give improved contrast and optimum depth of field.

Scan mode

Lets you choose the screen refresh method:
in ***Auto*** mode, the TV software will select the best mode for the signal being viewed; ***100Hz*** will give a steady picture for most signal transmissions;
We recommend that you set ***Scan mode*** to ***Progressive*** when viewing a PAL 60 or NTSC transmission.

Note:

- When viewing a PAL transmission (other than PAL 60) with ***Scan mode*** set to ***Progressive***, the screen will flicker, this is not a fault.

Press the ***SOUND*** menu button

Move to chosen menu option

Adjust chosen option or access chosen menu

Press the ***TV/AV*** button at any time to go back to watching TV

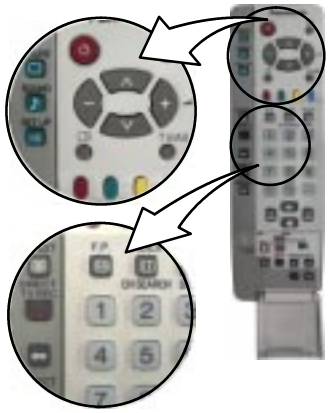
Pressing the ***STR*** button after adjusting features will store the new setting as the default (replacing the factory setting).

Some features are only available with the ***Surround*** feature switched off.
Press the ***Surround*** button to switch between ***On*** and ***Off***

SOUND

TV/AV

STR



Volume Lets you set the overall output volume.

Bass Increase or decrease level to enhance or minimise lower, deeper sound output.

Treble Increase or decrease level to enhance or minimise sharper, higher sound output.

Balance With the ***Surround*** feature switched ***Off***, the levels of sound between the left and right speakers can be adjusted to suit your listening position.

Headphone volume Can be adjusted independently of the TV speakers so that everyone can enjoy listening at a level comfortable for them. When in ***picture and picture*** mode, note that the headphones will relay the soundtrack for the programme in the left window (the current programme position). When using one of the other double window features, the soundtrack for the programme in the main window (rather than the smaller window) is relayed.

Subwoofer Choose from ***Off***, ***Normal*** and ***Full***.
Off turns ***Off*** subwoofer output, ***Normal*** provides a mid–level bass output and ***Full*** provides an enhanced bass effect.

NICAM Usually set to ***On*** to receive a stereo signal, but if reception deteriorates or if the service is not available then switch to ***Mono***. Mono (***M1***) and (***M2***) can also be selected if a mono signal is being transmitted.

Mode With the ***Surround*** feature switched ***Off***, sound quality can be improved when watching music or speech by selecting the appropriate mode – ***Music*** or ***Speech***.

Digital Audio If you do not have any digital audio input, set to ***Off***.
If you have a digital audio input from external equipment such as a DVD player, that equipment will usually be connected to the TV via one of the Scart sockets to provide pictures and sound (eg: a DVD player connected to AV4). ***Digital Audio*** lets you turn off the sound input from the Scart socket (as sound is provided via the digital audio input). Select from ***AV1*** / ***AV2*** / ***AV3*** / ***AV4*** (eg: if you have a DVD player connected to the AV4 socket, with a coaxial or an optical cable connected to provide digital audio input, select AV4). See pages 36 to 37 for connection details.

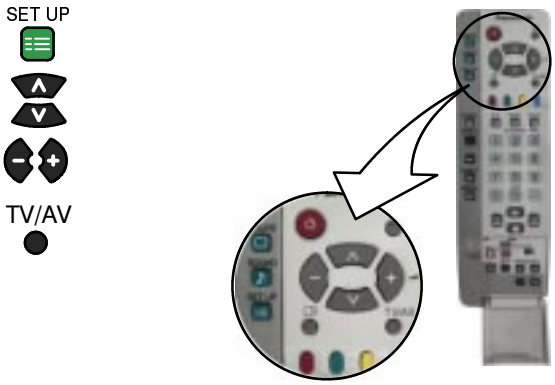
Surround menu Leads to the ***Surround menu***, where you can alter settings relating to the sound system, as described on pages 34 to 35.

Press the ***SETUP*** menu button

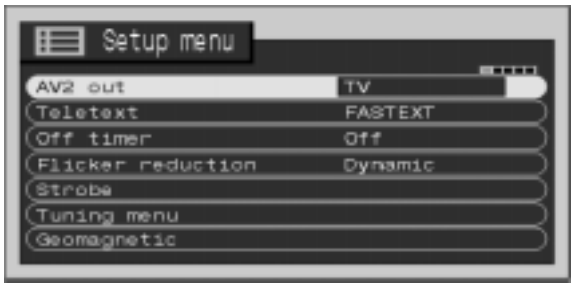
Move to chosen menu option

Adjust chosen option or access chosen menu

Press the ***TV/AV*** button at any time to go back to watching TV.



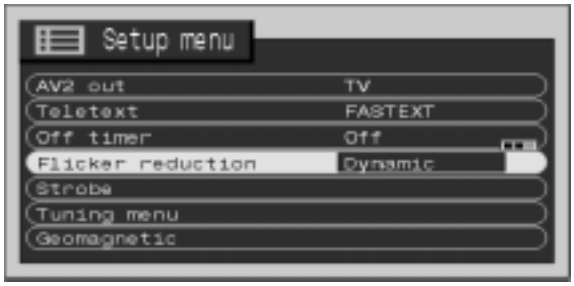
AV2 out Offers a choice of signals to send to the AV2 Scart socket. You can choose from the current **TV** programme position, the signal entering ***AV1*** / ***AV3*** / ***AV4*** or ***Monitor*** – the picture displayed on screen.



Teletext Allows you to choose between ***FASTEXT*** or ***LIST*** mode. See page 31.

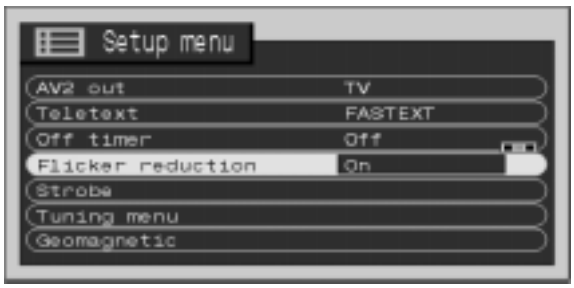
Off timer Switches the TV off within a preset time which you can choose from between 0 to 90 minutes in 15 minute intervals.

Flicker reduction Lets you control any picture movement. Set to ***Dynamic*** to activate motion compensation, to smooth the image and get rid of picture movement. Set to ***On*** to correct minor picture movement, or if slight ghosting of figures occurs when using the ***Dynamic*** setting. Set to ***Off*** to have no flicker reduction at all, occasional broadcasts may benefit from using this setting.



Strobe Lets you take a series of freeze–frame 'photos' of a piece of action (for example: the finish of a race). See page 27.

Tuning menu Provides access to many other features including ***Programme edit*** and ***Auto setup***. See page 17.



Volume correc. (Available in AV mode only). Lets you adjust the volume level of individual AV inputs. This feature allows you to bring the volume level of one AV input into line with the current (RF) programme and the other AV inputs so you won't need to adjust the volume each time you change the programme viewed.

Geomagnetic If you notice a slight tilt to the picture, use this feature to eliminate it. See Step 6, page 12 (Quick Start Guide).

Tuning menu – overview

Press the ***SETUP*** menu button

Move to ***Tuning menu*** option

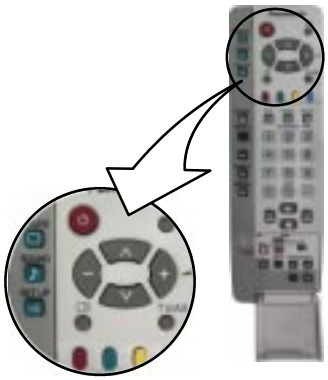
Access ***Tuning menu***

Move to chosen menu option

Adjust chosen option or access chosen menu

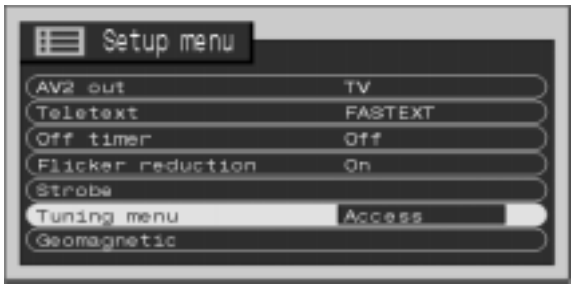
Press the ***TV/AV*** button at any time to go back to watching TV

Pressing the ***STR*** button after having adjusted some features will store the setting as the default (replacing the factory setting)



Programme edit

Access in order to customise your programme settings (eg: adding or deleting a programme position). See page 18.

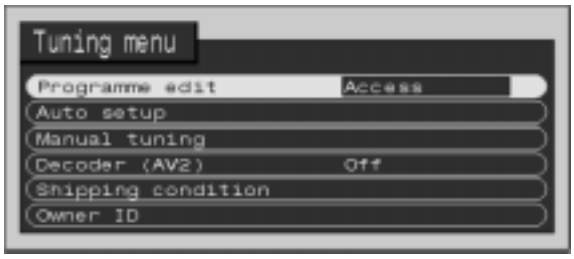


Auto setup

Allows you to automatically retune the TV. Useful if you move house and wish to retune your TV to the local stations. See page 20.

Manual tuning

Allows individual programme positions to be tuned manually. See page 21.



Decoder (AV2)

This option is used when a decoder is connected via AV2. Store the setting as ***On*** so that every time this programme position is selected, the TV software is set to handle the decoded information (this is important if your decoder unit is connected to AV2 via a Q–Link VCR).

Programme edit
Prog. Chan. Name Lock
1 : CH44 ABC Off
2 : CH51 XYZ Off
3 : CH41 FTP Off
4 : CH47 123 Off
5 : CH37 456 Off
Delete Add Move TV->VCR

Shipping condition

Allows you to clear all tuning information and reset all control levels back to factory settings.
See page 22.

Owner ID

Allows you to enter a security code and address information. See page 23.

Tuning menu – Programme edit

Press the ***SETUP*** menu button

Move to ***Tuning menu*** option

Access ***Tuning menu***

Move to ***Programme edit*** option

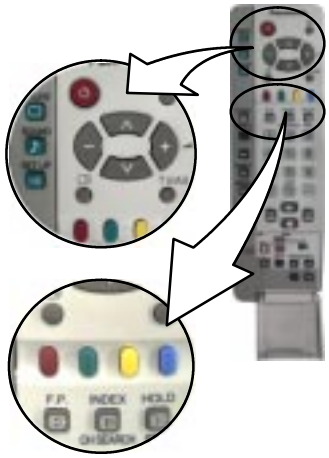
Access ***Programme edit***

Move to chosen programme position (eg: Prog. 3)

Make required change, eg: renaming a programme channel (see the relevant procedure below)

Press the ***TV/AV*** button at any time to go back to watching TV

Pressing the ***STR*** button after having adjusted some features stores the change made

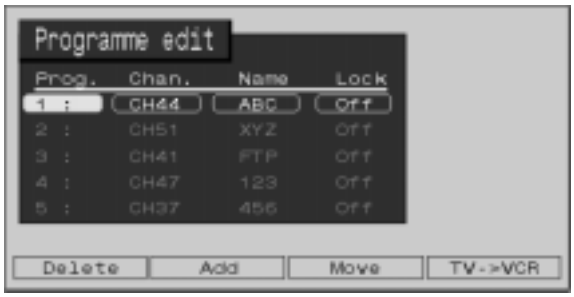


Adding / deleting a programme channel

Make sure the cursor is in the ***Prog.*** column

Press the green button to add a programme channel to the programme position, or the red button to delete one

Press the same button again to confirm your decision



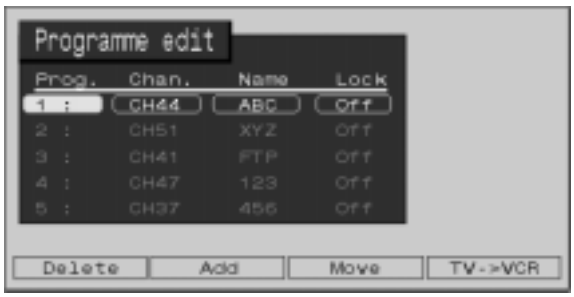
Moving a programme channel

Make sure the cursor is in the ***Prog.*** column

Press the yellow button

Choose the new position for the programme channel

Press the yellow on screen selector key again to confirm your decision



Renaming a programme channel

Move to the ***Name*** column

Choose the new character. The box at the bottom of the screen shows the character currently selected.

Move to the next character position

Continue until renaming is done

Press ***STR*** to store the new name

Locking a programme channel

You may wish to lock a programme channel to prevent access to it

Move to the ***Lock*** column

Choose between Lock ***On*** or Lock ***Off***

Press ***STR*** to store the new setting

Note:

- When a programme position is locked, Direct Channel Access using the ***C*** and numeric buttons on the remote control is not available

Copying programme information to a VCR

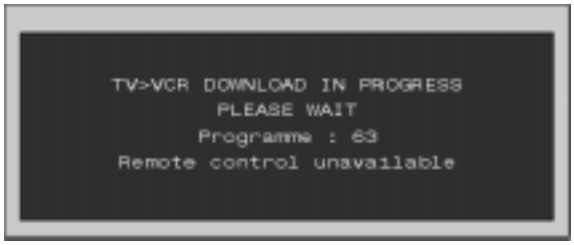
You can copy programme information to a compatible VCR connected to AV2 (see page 37 for connection information)

Press the blue button.

Programme data will now be sent to the VCR. This might take a few seconds, depending on the number of stations stored. If the message “Unable to download, check your VCR” appears on the screen, the television is unable to send the programme information to the VCR. See the VCR instruction book for further information.

Note:

- If you have a Q–Link VCR, ensure that it is in ***Standby*** mode. If your VCR is not a Q–Link VCR, please refer to the VCR instruction book.



Tuning menu – Auto setup

Auto setup automatically retunes your TV. This feature is useful if, for example, you move house and wish to retune your TV to receive the local stations.

Press the ***SETUP*** menu button

SET UP

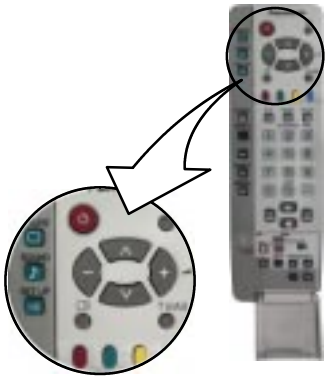
Move to ***Tuning menu*** option

Access ***Tuning menu***

Move to ***Auto setup***

Access ***Auto setup***

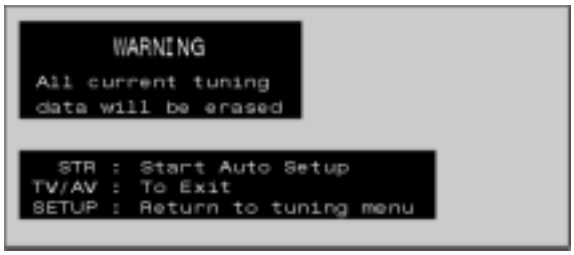
Press to confirm start



Note:

- ***If you proceed with the next step all tuning data will be erased*** (all stations and their programme positions stored in your TV's memory will be wiped out so the new settings can be stored).

  If you exit the procedure after this point and before ***Auto setup*** is complete, no station information will be stored. Restart and complete the Auto setup procedure so that the TV is retuned.



Press ***STR*** to start ***Auto setup***

STR

The TV will search for, locate, store and then sort into order your local stations.

If a compatible VCR is connected via the AV2 socket, programme data will be sent to the VCR via Q-Link (see page 28).

Once this operation is completed the TV will display the programme now stored on programme position 1.

Press the ***TV/AV*** button at any time to go back to watching TV (please read the ***Note*** in the above procedure)

TV/AV

Tuning menu – Manual tuning

It is possible to retune individual programme positions:

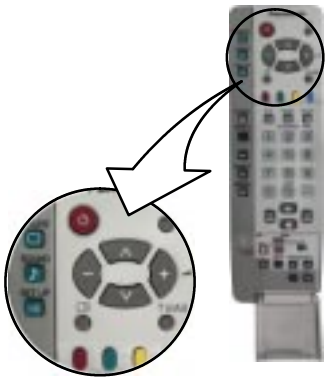
Press the ***SETUP*** menu button

Move to ***Tuning menu*** option

Access ***Tuning menu***

Move to ***Manual tuning***

Access ***Manual tuning***



Select the programme position to be tuned

Press repeatedly until required station is found

When the desired station is found, press ***STR*** to store. The programme position will flash

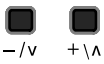
Press the ***TV/AV*** button at any time to go back to watching TV

Manual tuning (via front panel)

It is also possible to use the control panel buttons on the front of your TV to tune individual programme positions:

Press the ***F*** button (Front panel) until ***Tuning mode*** is reached

Press the **–** or + button to access ***Tuning mode***



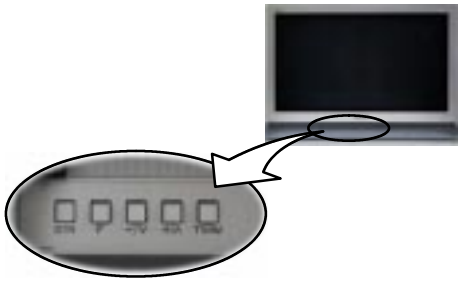
Press the ***TV/AV*** button to move between ***Change programme*** and ***Search***

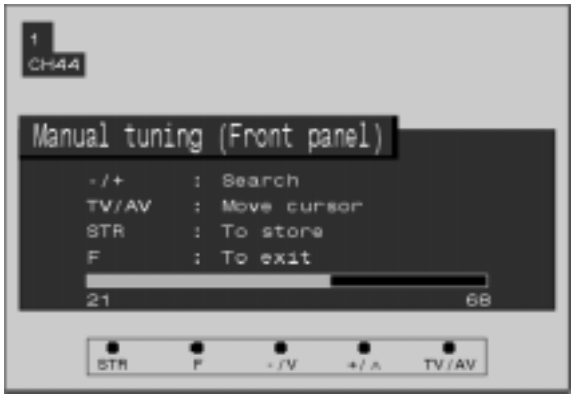
Press the **–** or + button to change programme position or start search

When the desired station is found, press ***STR*** to store. The programme position will flash

Repeat above procedure to tune additional programme positions

Press the ***F*** button at any time to go back to watching TV





Shipping condition

Shipping condition allows you to reset the TV to its original condition, i.e. no channels tuned in.
This is useful, for example, if you move to a different area when you will probably want the TV to tune itself to your new local stations.

This can be done either through the ***Shipping condition*** menu or through the ***Auto setup*** menu.

The ***Shipping condition*** menu will reset all data, clearing all tuning information and resetting all control levels back to factory settings. You may need to adjust your VCR or programme position '0' VCR after operating the ***Shipping condition*** menu – refer to page 29.

Press the ***SETUP*** menu button

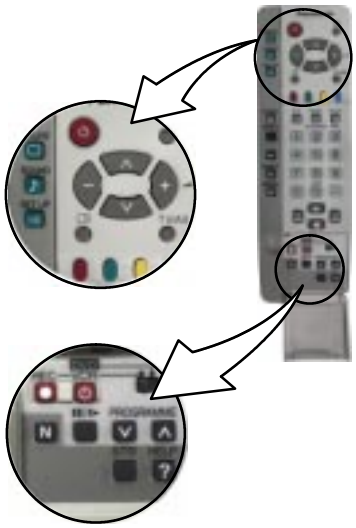
SET UP

Move to ***Tuning menu*** option

Access ***Tuning menu***

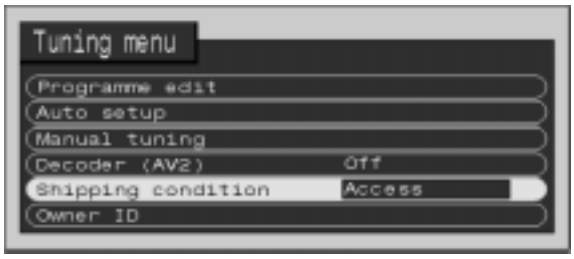
Move to ***Shipping condition***

Access ***Shipping condition***



Press ***STR*** to start

STR



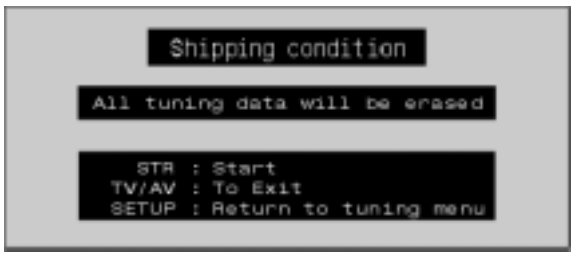
Press again, to confirm, each time that you are asked, "Are you sure ?"

STR

Switch TV off and wait for a few seconds

Switch TV on again

Auto setup will begin, stations will be located, sorted and stored ready for use. See page 20.

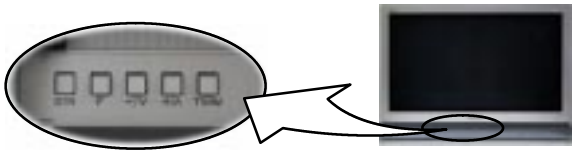


Owner ID

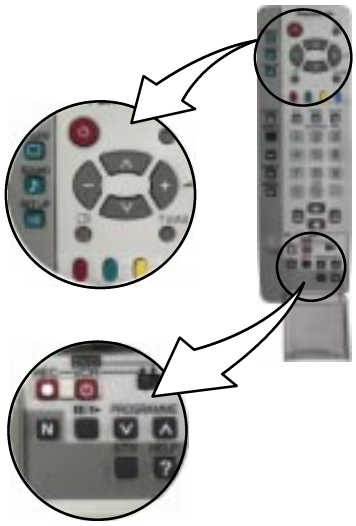
Owner ID allows you to enter a security code (Owner ID) and personal details into its memory, so that in the unfortunate event of theft it will help the police to trace the owner.

If you wish to check the personal details already entered into the TV, press the ***F*** button (Front panel) and hold for 6 seconds (initially the volume level function will appear, as you continue to hold down the ***F*** button it will disappear again, and the Owner ID information will appear). The details already entered are displayed on screen.

F



If ***Owner ID*** information was not entered when you switched on your TV for the first time or it is necessary to alter some of the information, ***Owner ID*** can be re-accessed via the ***Tuning menu***.



Press the ***SETUP*** menu button

SET UP

Move to ***Tuning menu*** option

Access ***Tuning menu***

Move to ***Owner ID***

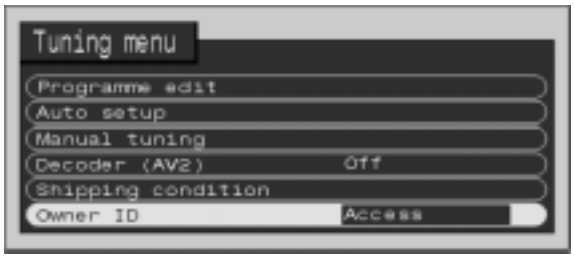
Access ***Owner ID***

If the ***Owner ID*** has previously been set, enter the ***PIN NUMBER*** (using 0 to 9 on the remote control) followed by ***STR*** to proceed, this will take you to the ***NAME*** option

STR

If no ***Owner ID*** has previously been set, enter the required 4 digit ***Owner ID PIN NUMBER*** (using 0 to 9 on the remote control)

If a 4 digit ***PIN NUMBER*** was entered above, you will be taken automatically to the ***NAME*** line



If not, move to the ***NAME*** line

Change character

Select character position

Repeat above until ***NAME***, ***HOUSE NUMBER*** and ***POSTCODE*** are entered

Press ***STR*** to store the details.
Press again when you are asked, "Are you sure ?"

STR

The ***Tuning menu*** will be displayed

STR

Press the ***TV/AV*** button to exit

TV/AV

For future reference,
write your ***PIN NUMBER*** here :

____ ____ ____ ____

ASPECT Aspect controls

Press the ***ASPECT*** button to move through the seven aspect options: ***Panasonic Auto***, ***4:3***, ***Zoom***, ***S–Zoom***, ***16:9***, ***14:9*** and ***Just***.

ASPECT

Notes:

- If you leave Aspect set to ***Panasonic Auto,*** the TV software determines the best ratio for each programme viewed. In order not to disrupt your viewing, no mode information is displayed while this is happening (eg: a programme may begin in ***4:3*** mode then seem to jump into ***Just*** mode). Simply press the ***ASPECT*** button to display mode information in the top left of the screen.
- A 16:9 picture has been used to illustrate all of the aspect modes described in this section.

The on screen selector keys (corresponding to the four coloured buttons on the remote control) that appear for some Aspect functions clear after a few seconds. If you want to select an operation when the keys are not shown, press the ***ASPECT*** button once more and the keys will reappear.

Panasonic Auto

Panasonic Auto determines the best aspect ratio to use to display the picture you are viewing. It does this using a four step process to determine if the picture being viewed is a widescreen picture.

If ***Panasonic Auto*** detects a widescreen signal it switches into the appropriate ***16:9*** or ***14:9*** widescreen mode. If ***Panasonic Auto*** does not detect a widescreen signal then the picture is displayed in ***Just*** or ***4:3*** mode.

The text shown on the screen indicates how ***Panasonic Auto*** determined which ratio to use:

'WIDE' appears in the top left of the screen if a widescreeen identification signal (WSS) is found or a signal is found through a Scart socket. ***Panasonic Auto*** switches to the appropriate ***16:9*** or ***14:9*** widescreen ratio.

'Panasonic Auto' appears in the top left of the screen if black stripes above and below the picture are detected. ***Panasonic Auto*** chooses the best ratio and expands the picture to fill the screen. This process can take several minutes, depending how dark the picture is.

'Panasonic Auto' appears in the top left of the screen and red and green keys at the bottom if no indication of a widescreen signal is found, the picture is displayed in ***Just*** or ***4:3*** mode. If the picture has a standard 4:3 aspect ratio then you may prefer to view it at its original size, the red and green keys that appear allow you to choose between viewing at standard **4:3** size or expanded in ***Just*** mode.

Equally, you may prefer to select one of the other modes available to view the picture.

Panasonic Auto

'WIDE' appears in the top left of the screen, ***Panasonic Auto*** switches to the appropriate 16:9 or 14:9 widescreen ratio.

Panasonic Auto

'Panasonic Auto' appears in the top left of the screen. The best ratio is chosen and the picture expanded to fill the screen.

Panasonic Auto

'Panasonic Auto' appears in the top left of the screen. The picture is displayed in ***Just*** or ***4:3*** mode, red and green keys appear, allowing switching between ***Just*** and ***4:3*** modes.

Notes:

- If, in ***Panasonic Auto*** mode, you experience problems with the screen display size when playing back widescreen format recordings from your VCR then it is possible that the tracking control of your VCR requires adjustment (your VCR instruction book will contain adjustment details).
- The widescreen aspect ratios of different films and programmes can vary. If these are wider than a standard 16:9 aspect picture then a black band may be visible at the top and bottom of the screen.

4:3

4:3 will display a 4:3 picture at its standard 4:3 size without any stretching. Black stripes will be visible down the left and right sides of the picture.

4:3

Zoom

Zoom mode magnifies the central section of the picture.
Press the red or green buttons to enlarge the picture vertically. Press the yellow or blue buttons to move the picture vertically (useful when there are sub–titles positioned below the picture).

Zoom

Blue button has been pressed to move picture upwards

S–Zoom

S–Zoom displays the picture at a greater magnification than ***Zoom*** mode.
Press the red or green buttons to move the picture horizontally. Press the yellow or blue buttons to move the picture vertically.

S–Zoom

Blue button has been pressed to move picture upwards

16:9

16:9 will display the picture at its maximum size but with slight stretching.

16:9

14:9

14:9 will display a 14:9 picture at its standard 14:9 size without any stretching. Black stripes will be visible down the left and right sides of the picture. Press the yellow or blue buttons to move the picture vertically.

14:9

Just

Use this mode when you wish to expand a 4:3 picture to fill the whole screen (rather than watching a programme with black stripes down the left and right sides of the picture). The 4:3 picture will be stretched horizontally so that the image fills the screen, this is done in such a way that the stretching is only obvious at the left and right edges of the screen.

Just

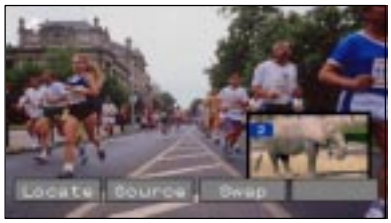
Press the ***MULTI WINDOW*** button (whilst the on screen selector keys are on screen) to move between watching the current programme, the ***picture in picture*** feature, ***picture out of picture*** and ***picture and picture*** feature.

The on screen selector keys (corresponding to the four coloured buttons on the remote control) that appear for the features clear after a few seconds. If you want to select an operation when the keys are not shown, press the ***MULTI WINDOW*** button once more and the keys will reappear.

Picture in picture

Allows two pictures to be viewed at the same time.
Press the green button to select the contents of the smaller window, switching between displaying a TV channel and all AV sources in turn. To change the TV channel: press the green key until the currently selected TV channel is shown, then use the remote control to change channel (while the on screen selector keys are still displayed).
Press the red button to reposition the smaller picture on screen.
Press the yellow button to swap the contents of the two windows.
Use the remote control to select a TV channel or an AV source to appear in the main window.

Picture in picture mode



The two programmes have been swapped, the programme in the smaller window has become the main window programme.

Picture out of picture

Only available in ***4:3*** aspect mode, this feature allows two programmes to be viewed at the same time, as ***picture in picture*** does. The difference is how the two programmes are displayed: in ***picture in picture*** the smaller window appears within the main image; in ***picture out of picture*** the smaller window appears to the right of the main image.
Press the green button to select the contents of the smaller window, switching between displaying a TV channel and all AV sources in turn. To change the TV channel: press the green key until the currently selected TV channel is shown, then use the remote control to change channel (while the on screen selector keys are still displayed).
Press the yellow button to swap the contents of the two windows.
Use the remote control to select a TV channel or an AV source to appear in the main window.

Picture out of picture mode

Picture and picture

Allows two pictures to be viewed at the same time.
Press the green button to select the contents of the right window, switching between displaying a TV channel and all AV sources in turn. To change the TV channel: press the green key until the currently selected TV channel is shown, then use the remote control to change channel (while the on screen selector keys are still displayed).
Press the yellow button to swap the contents of the two windows.
Use the remote control to select a TV channel or an AV source to appear in the left window.

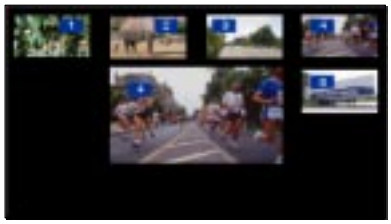
Picture and picture mode

INDEX / CH SEARCH Channel search

Press the ***CH SEARCH*** button to show freeze–frames of the programmes being broadcast on all of the stored channels. These images are displayed in series clockwise around the edge of the screen, starting from the top left. The current programme is displayed in the centre of the screen, still playing.
The feature cycles through the stored channels until either the ***STILL*** key is pressed to pause the search or the ***CH SEARCH*** button is pressed to exit the feature.
Press the red button to select each channel's freeze–frame in turn.
Press the green button to watch the selected channel, exiting the feature.
Press the blue button to watch the current programme (displayed centre screen), exiting the feature.

INDEX / CH SEARCH

HOLD / STILL INDEX / CH SEARCH



Channel search

TV/TEXT Picture and text

Press the ***TELETEXT*** button to move between watching the current programme, viewing teletext and the ***picture and text*** feature. ***Picture and text*** lets you see the current programme and a page of teletext side by side.
Whilst using this feature, the remote control affects the teletext page; if you wish to make changes to the programme viewed press the ***TELETEXT*** button to return to watching the programme on its own then make the desired changes.

TV/TEXT

TELETEXT mode

Picture and text mode

HOLD / STILL Still

Press to freeze the picture, press again to return to watching the current programme.

HOLD / STILL

Strobe

(Access ***Strobe*** via the ***Setup*** menu, see page 16).
Takes a series of freeze–frame images (one second delay between each image being taken) from the current programme watched, these are displayed in series clockwise around the edge of the screen, starting from the top left. The current programme is displayed in the centre of the screen, still playing.
To pause (freeze) ***Strobe***, press the ***STILL*** button on the remote control, press again to continue taking the freeze–frames.
To exit the ***Strobe*** feature and return to watching the current programme, press any button on the remote control other than ***STILL***.

Strobe mode

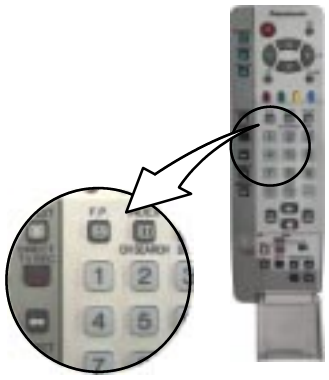
HOLD / STILL

This is a ***Q – Link*** TV. Q – Link, NEXTVIEWLINK and similar technology provide a way for a TV and VCR to communicate, making it easier to record programmes. To be able to exchange information both the TV and the VCR must be fitted with this technology, and must be connected with a SCART lead (full function type) between the AV2 socket of the TV and the appropriate socket on the VCR (see the VCR instruction book for details).

Q – Link lets your TV instruct a ***compatible VCR*** to record the programme currently shown on screen, no matter what programme position is set on the VCR.

Press the ***DIRECT TV REC*** button

DIRECT TV REC



Notes:

- If the VCR is in Standby mode, it will automatically switch on when you press the ***DIRECT TV REC*** button.
- To ensure correct recordings are made, the television and VCR should share tuning information (see page 19).
- Whenever the Auto setup function is used, tuning data will be downloaded to the VCR (see page 20).

A message, sent from the VCR, will appear on screen showing what is being recorded, or if it is not possible to record. Some "Q-Link" compatible VCRs only display the message when on the VCR programme position (0) or in AV mode. See the VCR instruction book.

VCR recording preset prog	VCR is recording the programme signal from its own tuner. If you wish you can switch off the TV and leave the VCR recording in the normal way.
VCR recording TV source	VCR is recording the programme signal from the television. You must not change programme position or switch off the TV: if you do, the VCR will automatically stop recording and switch off.
No recording TAPE IS PROTECTED	The write protection tab on the back of the cassette has been removed.
No recording NO TAPE	Examples of other messages that might be displayed.
No recording TAPE MAY BE DAMAGED	

Preset Download

This allows the programme order from the TV to be downloaded to the VCR, this helps to ensure that correct recordings are made, there are several ways to perform this operation:

- During installation as explained in the 'Quick Start Guide' beginning on page 6.
- When Auto setup is started from within the Tuning menu, see page 20.
- When TV to VCR manual download is started from within 'Programme edit', see page 19.
- Preset download started from the VCR, refer to the VCR operating instruction book.

Notes:

- With Panasonic Q – Link VCRs these additional features are available:
  - If you insert a tape in the VCR and press the Play button whilst the TV is in 'Standby' mode, the TV will automatically switch On and select the AV2 input so that you can view the tape.
  - When the TV is switched into 'Standby' mode, the VCR will also switch into 'Standby' mode if there is no tape in the VCR, or if there is a tape in and the VCR is in 'Rewind' or 'Stop' mode (if the VCR is rewinding a tape, it will not switch into 'Standby' mode until rewinding has finished).
  - If the TV is in Standby mode and the VCR sends a menu to be displayed on the TV screen (e.g. Main menu), the TV will automatically switch On and the menu will be displayed.
- Not all VCRs support this technology. This TV will communicate with VCRs bearing the following logos:
  - "DATA LOGIC" (a trademark of Metz Corporation)
  - "Easy Link" (a trademark of Philips Corporation)
  - "Megalogic" (a trademark of Grundig Corporation)
  - "SMARTLINK" (a trademark of Sony Corporation)

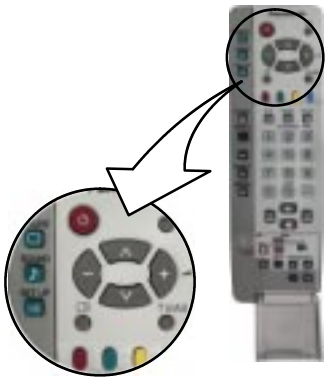
  Some may support certain features, but not others. Refer to the VCR operating instruction book.
- If Q – Link is inoperative, first confirm that your Scart lead is a full function type. Ask your dealer for further details.

Tuning your VCR and satellite receiver

Your new TV is supplied with programme position '0' set to receive an RF signal from your VCR, although a Scart connection is preferable if the VCR is so equipped (see page 37 for suitable inputs to each of the Scart sockets on this TV).
However, if for some reason your VCR is tuned to a different RF channel then you will not receive any picture or sound from your VCR on programme position '0' of the TV. Either adjust the tuning of the TV's programme position '0' (follow the instructions below) or adjust the RF channel of your VCR (some VCRs allow adjustment of their RF channel via their remote control unit) or both until the TV receives the RF output channel of your VCR.
It is intended that this advice is used in conjunction with the instruction books for your additional equipment.

Tuning your TV to the VCR

Switch on the VCR, insert and play a pre-recorded tape with known content



Press the ***SETUP*** menu button — SET UP

Move to ***Tuning menu*** option

Access ***Tuning menu***

Move to ***Manual tuning***

Access ***Manual tuning***

Select programme position '0' VCR

Start searching for the VCR playback of the known content tape

When the VCR playback is found, press ***STR*** to store — STR

Press the ***TV/AV*** button to exit — TV/AV

The tape with known content is found and displayed. Pressing ***STR*** will store the setting.

Notes:

- If picture patterning occurs on programme position '0' it may be necessary to adjust the RF output channel of the VCR, refer to the VCR instruction book.
- If a Satellite Receiver and a VCR are going to be used with RF cable connections it is important to avoid both units being set on the same channel.
  Refer to the Satellite Receiver and VCR instruction books for precise tuning information.

VCR / DVD operation

The Remote Control is capable of operating some functions of selected Panasonic VCRs and DVD (Digital Versatile Disc) equipment. Some VCR and DVD equipment have different functions, so to ensure compatibility please refer to the equipment's instruction book or consult your dealer for details.

DVD
VCR

Standby

Press to switch the VCR or DVD to standby mode.
Press again to switch back on.

VCR / DVD switch

Use this switch to select whether controls operate DVD equipment or your VCR.

Play

Press to playback the tape or DVD.

Stop

Press to stop the tape or DVD.

Skip / Fast Forward / Cue

VCR: Press to fast forward the tape. In Play mode, press to view the picture rapidly forward (Cue).
DVD: Press once to skip to the next track.

Skip / Rewind / Review

VCR: Press to rewind the tape. In Play mode, press to view the picture rapidly in reverse (Review).
DVD: Press once to skip to the previous track.

Pause / Still

Press in playback mode, the picture will pause.
Press again to restart play.

Programme Up / Down

Press to increase or decrease the VCR programme position by one.

REC

Record

Press this button to start recording.

- Teletext features may vary depending on the Broadcasting Companies and is only available if the channel selected is transmitting Teletext.
- Pressing the Picture button whilst in Teletext operation will display the contrast function with a cyan bar, press ◀ ▶ to alter the setting as required.
- Pressing the Sound button whilst in Teletext operation will display the volume function with a green bar, press ◀ ▶ to alter the setting as required.
- Pressing the Setup button whilst in Teletext operation will display special function options at the bottom of the screen.

What is LIST mode ?

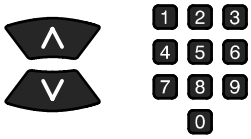
In LIST mode, four differently coloured page numbers are situated at the bottom of the screen. Each of these numbers can be altered and stored in the TV's memory.

What is FASTEXT?

In FASTEXT mode, four differently coloured subjects are situated at the bottom of the display. To access more information about one of these subjects, press the appropriately coloured button. This facility enables fast access to information on the subjects shown.

TV / Teletext mode

Press the ***TELETEXT*** button to switch between the current programme, teletext and the ***picture and text*** feature (lets you see the current programme and teletext side by side, see page 27).



Page Selection

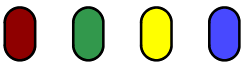
Pages can be selected in two ways :
a. Press the Up / Down buttons to increase or decrease the page number by one.
b. By entering the page number, using 0 –9 on the remote control.

Full / Top / Bottom

Press the ***SET UP*** button to display special functions, followed by the **Green** button.
Press the **Green** button again to expand the BOTTOM half.
Press again to return to normal (FULL) size.

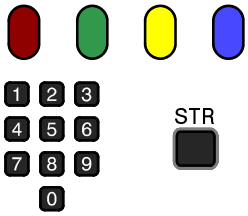
Reveal

Press the ***SET UP*** button to display special functions, followed by the **Red** button to reveal hidden words e.g. quiz page answers. Press again to hide.



Red / Green / Yellow / Blue buttons

In FASTEXT mode these correspond to the differently coloured subjects.
In LIST mode they correspond to the differently coloured page numbers.



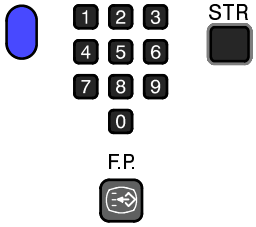
List Store

In LIST mode the four page numbers can be altered (programme positions 1 – 25 only).
To do this, press one of the four coloured buttons and enter the new page number.
Press and hold ***STR***, the page numbers will change to white indicating that the page is stored.

Hold

To hold the Teletext page when viewing multi–page information.
Press again to return to automatic page update.

It is not possible to change the programme position when in News flash, Update or Sub Coded Page Access operation.



Favourite Page (F.P.)

Stores a favourite page in memory for instant recall. To store such a page, the TV must be in LIST mode, and the programme position must be from 1 – 25.
Press the **Blue** button, select the page number, then press and hold the ***STR*** button. The page number is now stored.

Press ***F.P.*** to recall this page.

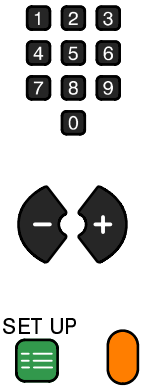
Update Display

Press the ***SET UP*** button to display special functions, followed by the **Yellow** button to view the TV picture whilst searching for a Teletext page (this is not necessary in ***picture and text*** mode, as the picture is displayed on the left of the screen)
When found, the screen will display the page number at the top left.
Press the **Yellow** button to view the page.
Press ***TV*** / ***TEXT*** again to return to normal TV operation.

News Flash
When a news flash page has been selected, press ***SET UP***, **Yellow**, to view the TV picture. When an update is received, the page number will be displayed on screen.
Press the **Yellow** button to display the News Flash
Press ***TV*** / ***TEXT*** to return to normal TV. operation.

Update
Press ***SET UP***, **Yellow** to see the update of information on certain pages.
When an update is received, the page number will be displayed at the top left of the screen.
Press the **Yellow** button to view the page.
Press ***TV*** / ***TEXT*** to return to normal TV operation.

Accessing sub pages



When Teletext information exceeds one page, it may take some time for the automatic changing of the sub pages to reach the sub page you require. As each sub page is found its number is displayed at the top of the page so that you may select it; as more sub pages are picked up, the display at the top of the page changes, so that you are always offered the most recently transmitted selection of sub pages.

In ***picture and text*** mode, use the left and right cursor buttons to select a sub page from the range displayed at the top of the Teletext window.

In Teletext operation, use the following procedure to access sub pages:

If the sub page you want to look at is not yet available, press the ***SETUP*** button (to display special functions) followed by the ***Yellow*** button to view the TV picture whilst waiting for more sub pages to be found. The sub pages found will be displayed across the top of the screen.

When the sub page you are waiting for is available press the ***Yellow*** button to return to viewing the Teletext pages, then use the left and right cursor buttons to select the sub page of your choice.

Notes:

- If you do not want the four coloured special function keys to be displayed on the TV picture while waiting for a sub page to be found, press either the ***PICTURE***, ***SOUND*** or ***SETUP*** menu button to clear the keys from the screen. Press the ***SETUP*** key once more to redisplay the keys.
- If you have cleared the special function keys from the screen and then used the left and right cursor buttons to select a sub page, whilst still viewing the TV picture, you must press the ***SETUP*** button then the ***Yellow*** button to display the Teletext page again.

Press ***TV***/***TEXT*** to return to normal TV operation.

Index

When in FASTEXT operation
Press ***INDEX*** to return to the main index page.
Depending on the way information is transmitted, this may have to be pressed more than once to return to the main index page.

Surround sound systems

Stereo reproduction normally uses left and right speakers, but Digital Theater Systems (DTS), Dolby Digital and Dolby Pro Logic Surround go further, adding a centre and other channels so you are immersed in sound and special effects.

Digital Theater Systems (DTS) / Dolby Digital

Both DTS and Dolby Digital split soundtrack information into 6 separate channels of sound which are output through the speaker setup: five full range channels (left, centre, right, stereo left and right surround) and a '0.1' (ie: limited range) bass channel. This gives you superb sound quality from DTS / Dolby Digital encoded tracks when a compatible speaker system is connected to your TV.

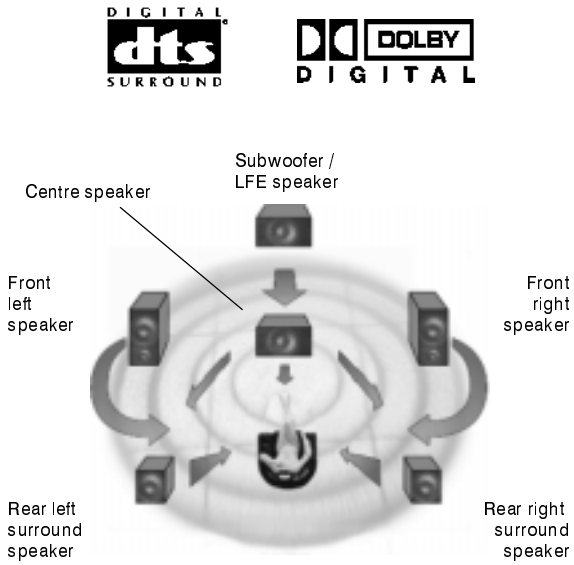
Most dialogue comes from the centre channel, which enhances dialogue and focuses it so it seems to come from the action on screen. The separate rear left and right channels give a dramatic sense of space, with sounds travelling in all directions between front, centre and rear channel speakers (eg: a rocket going overhead starts behind you to the left and explodes in front of you to the right). The '0.1' Low Frequency Effects (LFE) channel gives impact to bass sounds and to special effects more felt than heard (eg: the thud of a dinosaur footfall or the rumble of thunder).

While DTS and Dolby Digital are both high quality, '5.1' channel surround systems, the two systems differ in how they break down and store sound information.

They also differ in how they work with existing speaker setups: Dolby Digital has been developed to be backwardly compatible with Dolby Pro Logic and conventional stereo setups. DTS, on the other hand, focuses on the high quality, 5.1 channel surround output; choosing not to develop backward compatibility with existing sound systems.

Note:

- External equipment is usually connected to the TV via one of the Scart sockets to provide pictures and sound (eg: a VCR player connected to AV2). To receive a DTS or Dolby Digital encoded soundtrack from compatible equipment (eg: a DVD player, a set top box), you will also need to connect an optical or coaxial cable to one of the TV's digital audio sockets. See pages 36 to 37 for connection details, also see the ***Digital Audio*** option in the ***SOUND*** menu, page 15.



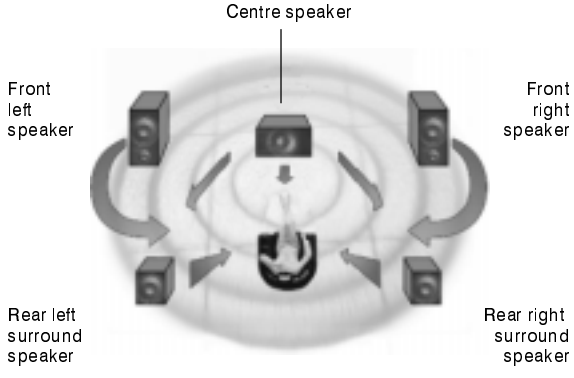
Dolby Pro Logic

Dolby Pro Logic Surround uses four channels of sound: left, right, centre and a mono rear channel, giving excellent reproduction of Pro Logic encoded tracks when a compatible speaker system is connected to your TV. Most dialogue comes from the centre channel, which enhances dialogue and focuses it so it seems to come from the action on screen. The rear channel is used to immerse you in atmosphere and special effects, the same output is sent to both rear speakers.

As with Dolby Digital, Pro Logic is backwardly compatible with a conventional stereo speaker setup.

Notes:

- To get Pro Logic information from Pro Logic encoded TV programmes, you must be able to receive stereo transmissions. If stereo transmissions are not transmitted in your area then the Pro Logic information will not be present on TV transmissions and Pro Logic decoding will only produce a centre channel output.
- See pages 36 to 37 for connection details.



Press the ***SOUND*** menu button

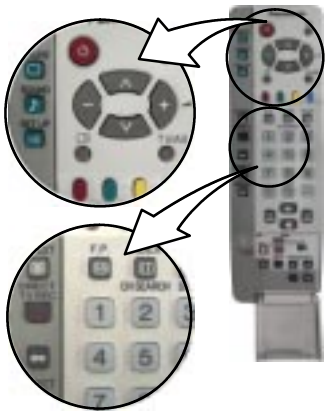
Move to ***Surround menu*** option

Access ***Surround menu***

Move to chosen menu option

Adjust chosen option or access chosen menu

Press the ***TV/AV*** button at any time to go back to watching TV



If a DTS / Dolby Digital input is detected the ***Surround menu*** options instantly change – ***Surround mode*** is not available. Ensure that the ***Digital Audio*** option in the ***SOUND*** menu is set to the correct AV input (see page 15 for details). A message displayed in the centre of the screen shows whether the signal is DTS or Dolby Digital, and gives a code indicating which channels are detected (see table to the right). Subwoofer output is not listed; if a subwoofer channel is detected then its contents are output. The subwoofer output level can be adjusted (or the subwoofer turned off) via the ***Subwoofer*** option in the ***SOUND*** menu (see page 15 for details).

Code	Front outputs			Rear surround outputs	
	Left	Right	Centre	Left	Right
1+1	Dual mono output				
1/0	Mono output				
2/0	✓	✓			
3/0	✓	✓	✓		
2/1	✓	✓		Mono output	
3/1	✓	✓	✓	Mono output	
2/2	✓	✓		✓	✓
3/2	✓	✓	✓	✓	✓

Volume — The volume adjustment sets the overall Surround output volume.

Surround mode — When a DTS / Dolby Digital input is not detected this option is shown. Choose between ***Pro Logic*** and ***Simulated***. The mode chosen here dictates the next menu option.

Speaker setting / Simulated setting — If a DTS / Dolby Digital input is detected, or if ***Pro Logic*** is selected in ***Surround mode***, this menu option is ***Speaker setting,*** allowing selection of ***Normal***, ***Phantom*** or ***3 Stereo*** modes, as described on page 35.
If ***Simulated*** is selected in ***Surround mode***, this menu option is ***Simulated setting***, allowing selection of ***Disco***, ***Movie*** or ***Stadium*** modes, as described on page 35.

Speaker level — Allows adjustment of the volume for each speaker, as described on page 35.

Front distance — Allows setting of the distance from the listening position to the front speakers.

Rear distance — Allows setting of the distance from the listening position to the rear speakers. If the rear surround speakers are closer to you than the centre speaker, you may hear dialogue "leakage" from the rear surround speakers. It may be necessary to reduce the volume of the rear speakers.

Internal speaker — Switches TV's internal left and right speakers ***On*** or ***Off***. Set to ***Off*** if you are using external front left and right speakers (connected using RCA cables via an external amplifier), otherwise leave set to ***On***. See page 40 for speaker connection details.

If a DTS / Dolby Digital input is detected, the ***Surround menu*** is as shown above (no ***Surround mode*** available).

If no DTS / Dolby Digital input is detected, ***Surround mode*** appears as a menu option.

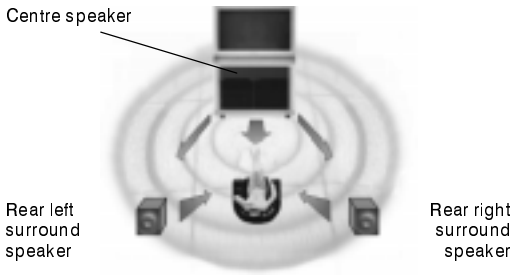
DTS / Dolby Digital and Pro Logic modes

With a DTS / Dolby Digital input or if ***Pro Logic*** is selected in ***Surround mode***, the following three modes of operation are available as the ***Speaker setting***: ***Normal***, ***Phantom***, ***3 Stereo***.

Normal If external rear speakers and an external centre speaker are connected, use ***Normal*** mode. Left and right speaker information will be produced by the TV's internal left and right speakers. With a DTS / Dolby Digital 5.1 input, the subwoofer / LFE speaker information is produced by the TV's internal subwoofer. If the internal speaker is switched off (see page 34) and external left and right speakers used, the speakers must be connected using RCA cables, via an external amplifier (otherwise they will not output any sound). See pages 39 and 40 for connection details.

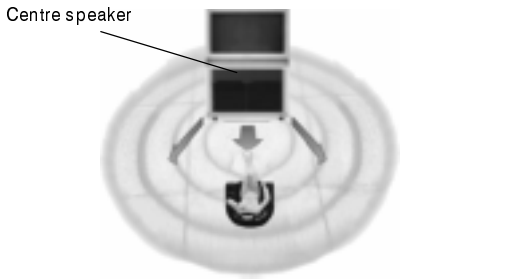
Phantom If external front left, right and centre speakers are not connected, use ***Phantom*** mode. Left, right, and centre information will now be produced by the TV speakers. If you choose to use this mode with the internal speaker switched off and external front left and right speakers connected, these must be connected using RCA cables, via an external amplifier (otherwise they will not output any sound). See pages 39 and 40 for connection details.

3 Stereo This is the best mode to use if front and rear left and right speakers are not connected. When using this mode, the left, right and rear left and right surround information is produced by the TV's internal left and right speakers. If the internal speaker is switched off (see page 34) and external left and right speakers used, they must be connected to the TV using RCA cables, via an external amplifier (otherwise they will not output any sound). See pages 39 and 40 for connection details.



Normal mode

Phantom mode



3 Stereo mode

Simulated mode

Simulated surround modes allow various types of surround effects to be produced by mimicking both the direct sound, as heard by the audience, and the sound reflected back from the surrounding walls e.g. ceiling and floor space in a space such as a disco. There are three different effects to choose from, each reflecting a different atmosphere:

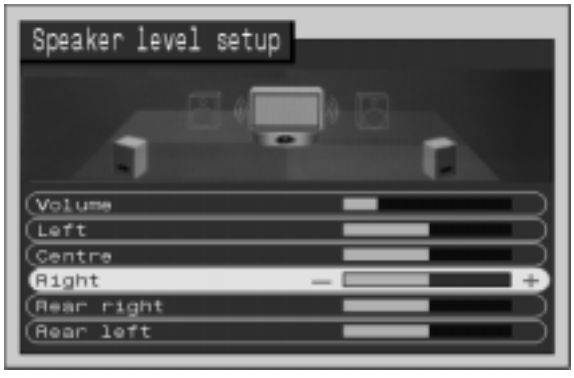
Setting	Appropriate sources	Effect
Disco	Disco, dance or jazz music	A crowded nightclub
Movie	All movies or music software recorded without Dolby Surround	Simulates a surround sound recording
Stadium	Any live sports occasion	A packed sports stadium

Speaker level setup

The speaker output levels from the different options, eg: ***Left***, ***Centre***, ***Right***, ***Rear left*** and ***Rear right***, should be adjusted from your usual listening position, to obtain the best results. The level can be set using either the TV sound or the provided test signal.

Notes:

- The adjustments available will vary according to the mode chosen.
- If you have a DTS / Dolby Digital 5.1 input, and are using the internal subwoofer to produce the subwoofer / LFE information, you can change the subwoofer / LFE volume by altering the ***Subwoofer*** setting in the ***SOUND*** menu. See page 15.
- When using external stereo equipment, it is advisable to set the speaker levels to the midpoint position.



Speaker level setup – ***Pro Logic, Normal*** mode

Audio / video connections

It is possible to connect a variety of additional equipment to this TV. The following pages detail how to connect external equipment to both the front and rear of the TV.

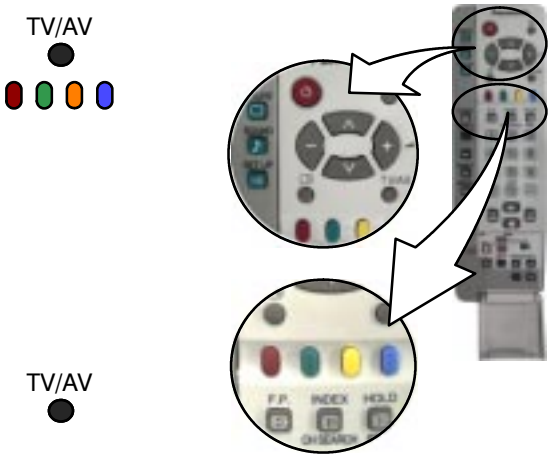
Once your equipment is connected, use the following procedure to view the input:

Press the ***TV***/***AV*** button

Press the relevant on screen selector key to select the AV source you wish to view. To select the S–VHS inputs on ***AV2*** and ***AV4*** (***AV2***/***S*** and ***AV4***/***S***), press the relevant coloured button to select either ***AV2*** or ***AV4***, then press again to select the S–VHS input (for example: press the green button to select ***AV2*** if you have connected a VCR to the ***AV2*** Scart socket; if you have a S–VHS VCR, you should press the green button again to select ***AV2***/***S***. Pressing the green button again switches back to ***AV2***.)
The on screen selector keys that appear clear after a few seconds. If you want to select an input when the keys are not shown, press the ***TV***/***AV*** key once more and the keys will reappear.

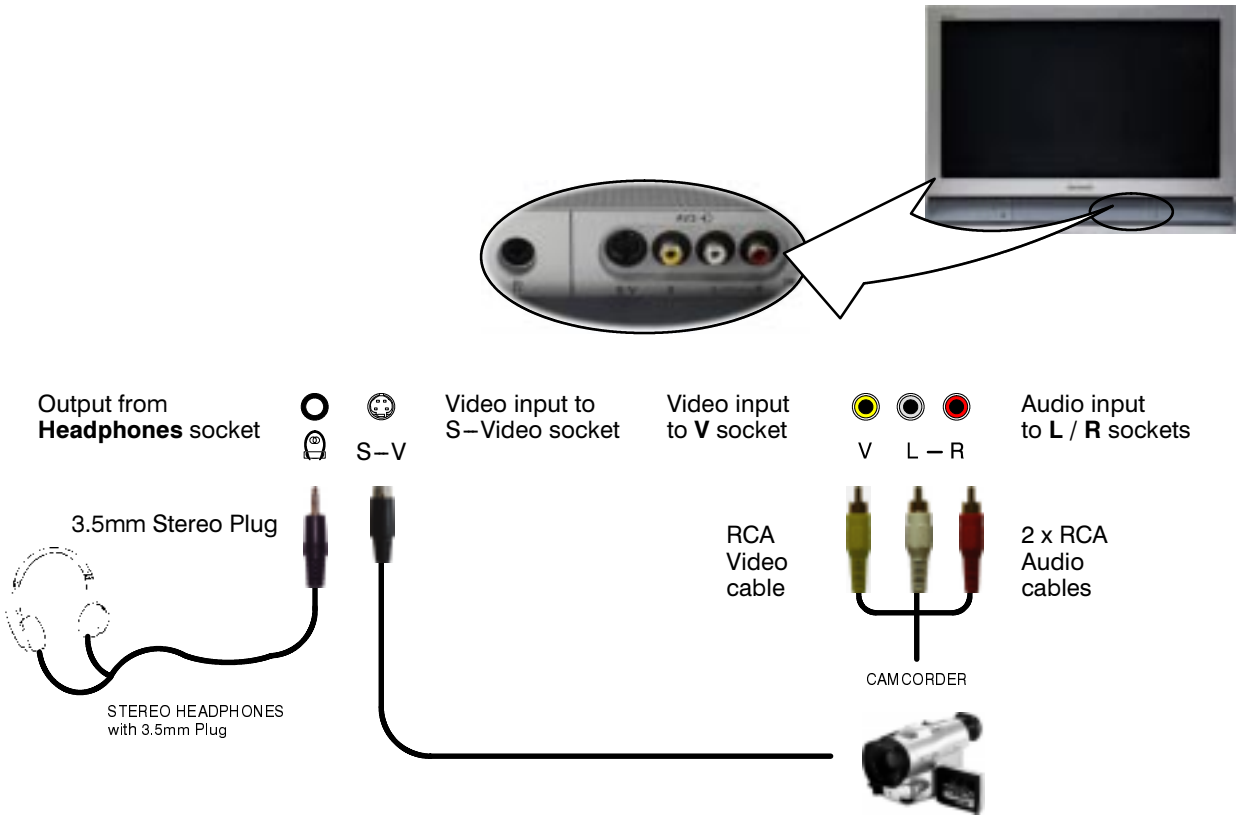
Notes:

- You can also select an AV source using the ***TV***/***AV*** button on the control panel on the front of your TV.
  Press the ***TV***/***AV*** button repeatedly until you reach the AV source you wish to view.
- When in ***AV mode*** a reduced number of options are available in the ***SOUND*** and ***SETUP*** menus (eg: in the Setup menu there is no ***Tuning menu*** option).



Front sockets

Additional equipment can be connected at the front of the TV via a 4 pin S–Video socket (AV3), RCA Audio / Video sockets (AV3) and a headphone socket.

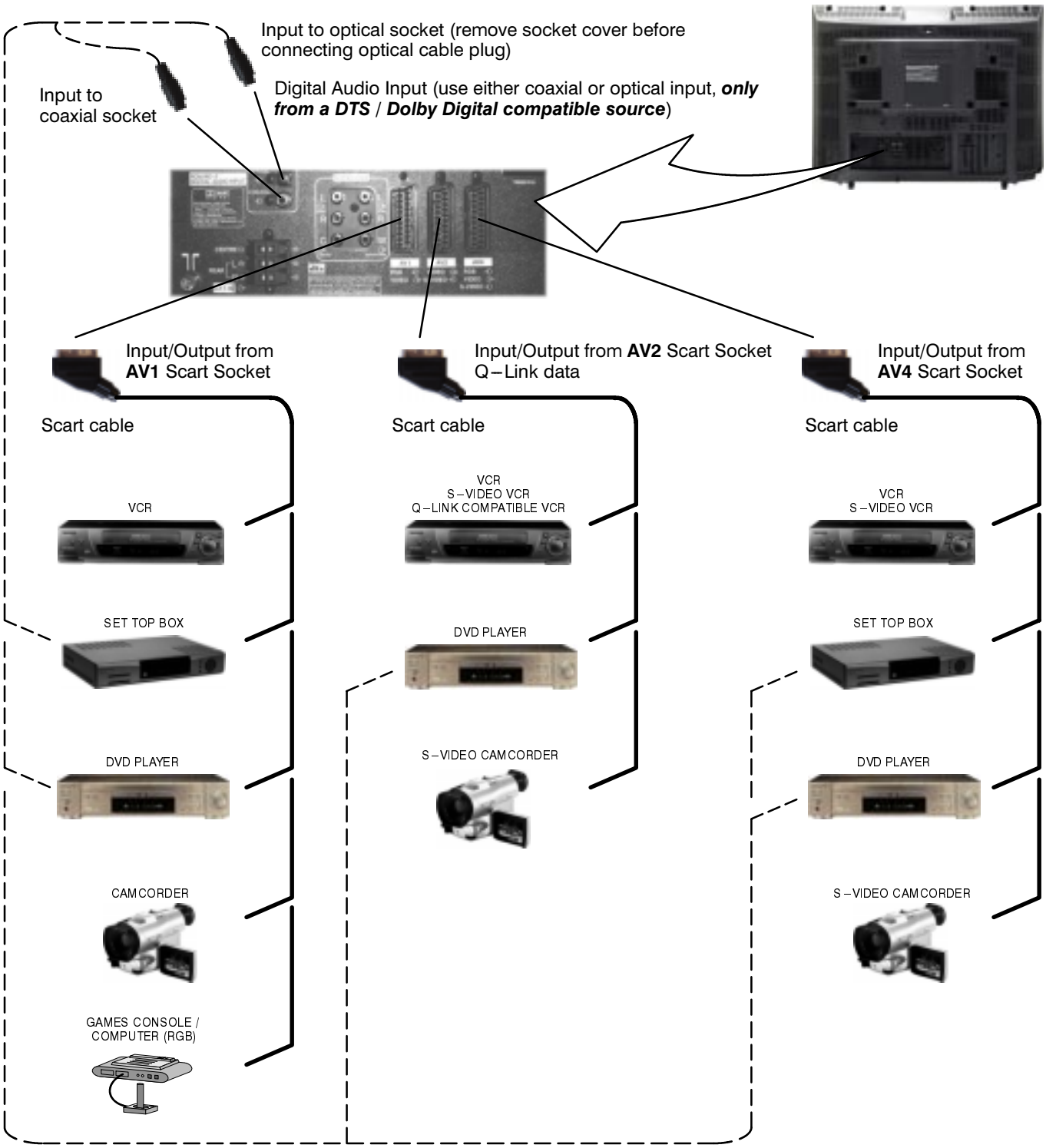


Notes:

- Additional equipment and cables shown are not supplied with this TV set.
- For S–Video socket wiring information see page 42.

Rear sockets

Additional equipment can be connected at the rear of the TV via three 21 pin Scart sockets, AV1 / AV2(S) / AV4(S), and via two digital audio sockets (for coaxial and optical inputs).

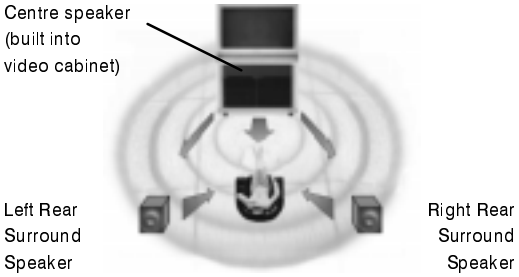


Notes:

- Additional equipment and cables shown are not supplied with this TV set.
- Do not connect a computer with TTL output (5V) to this set.
- The AV2 21 pin socket can also be used as an output to Audio/Video equipment; see page 16 for details.
- For Scart socket wiring information see page 42.
- We recommend that only one Digital Audio Input (either coaxial or optical) be connected to the TV at a time. If there is a coaxial and an optical input connected at the same time, the coaxial input will override the optical input – the sound from the coaxial input will be heard.

The external speaker connections (***EXT***) on the rear of the TV allow you to create your own system using external speakers. Connections are provided for a centre speaker and rear left and right surround speakers.

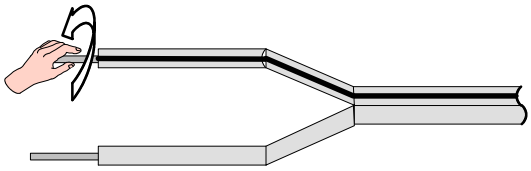
You may decide, for example, to connect the external rear left and right surround speakers and centre speaker provided, as shown here:



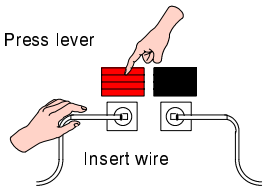
Connecting external speakers

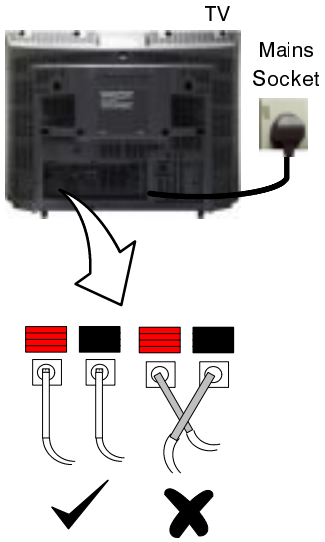
The TV must be switched ***Off*** before connecting external equipment.

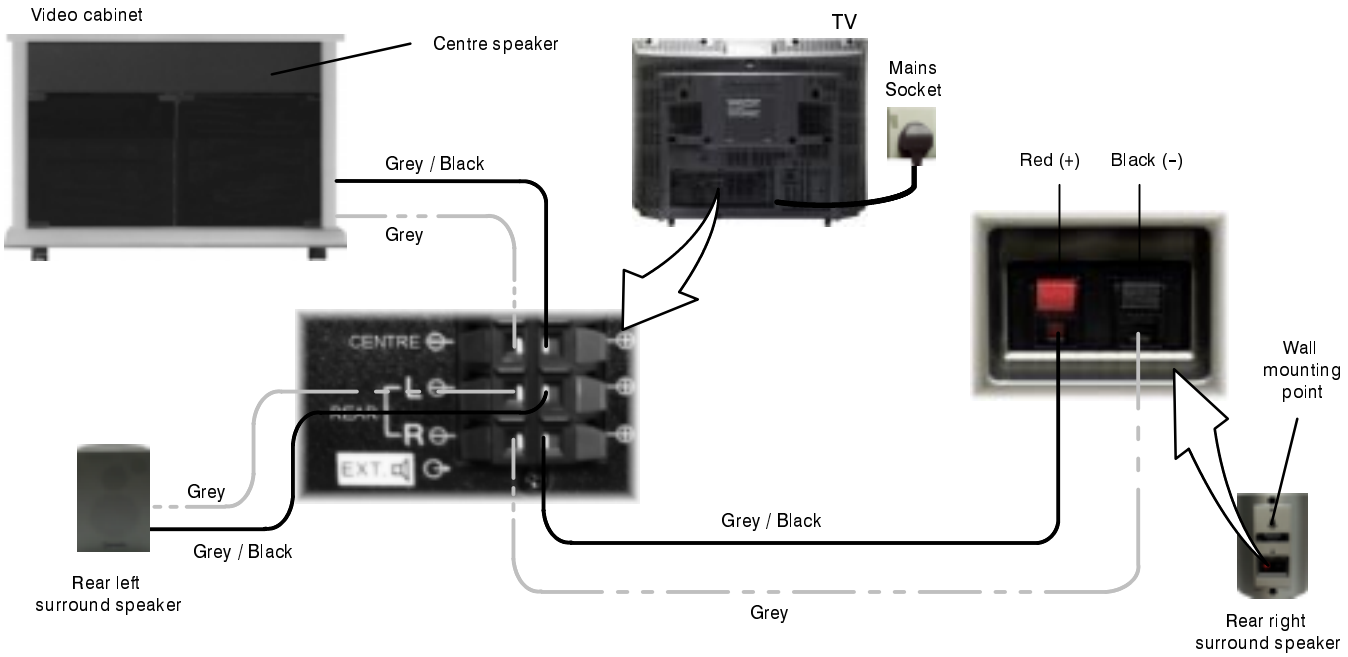
1 Twist the wire ends before inserting.



2 Insert into terminals. Ensure that bare speaker wires are not touching.



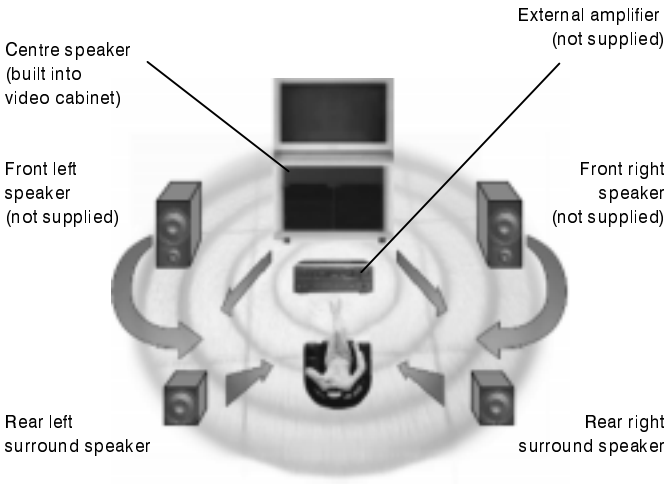


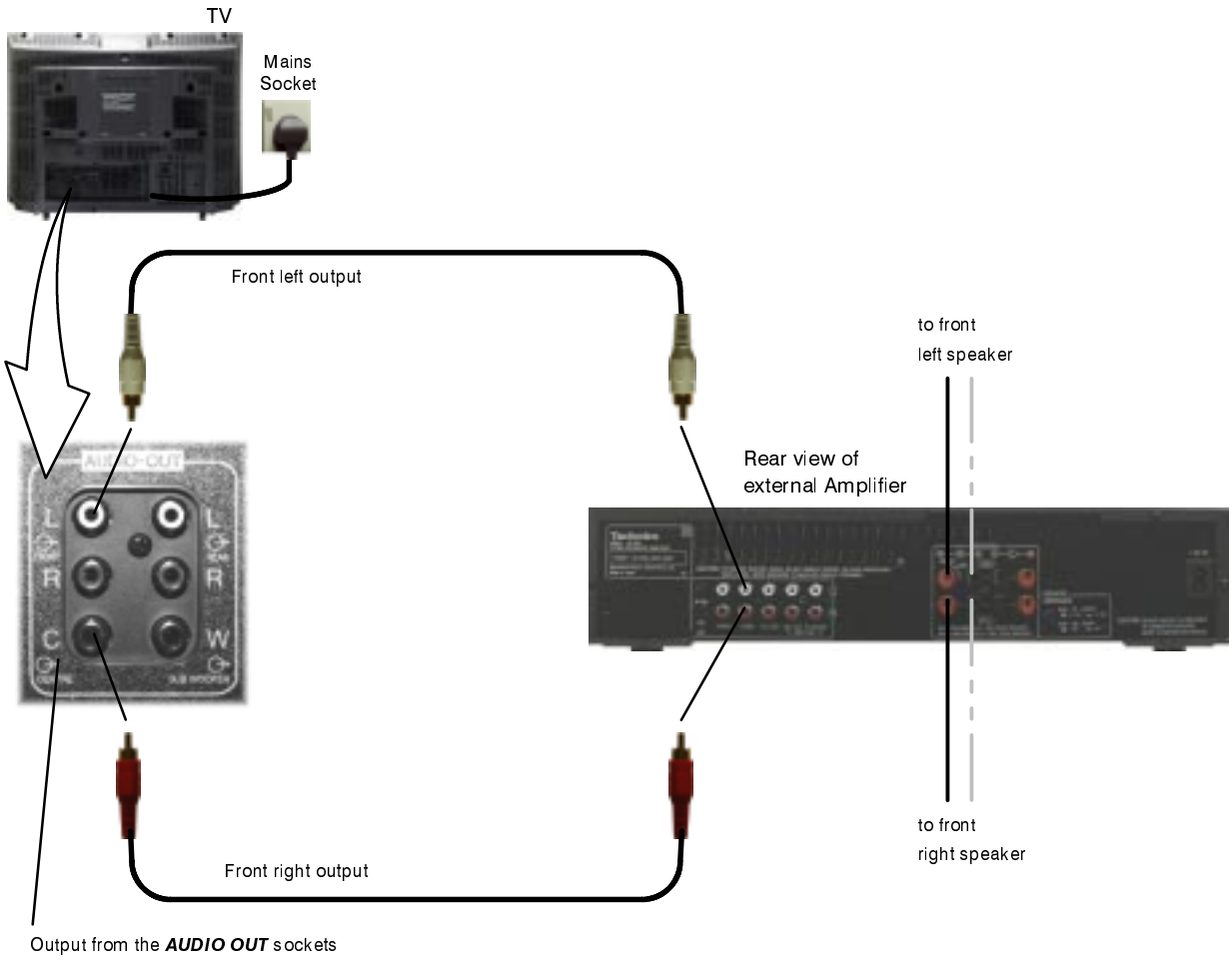


The ***AUDIO OUT*** sockets on the rear of the TV allow you to create a custom sound system using an external amplifier and external speakers.

Connecting external amplifiers and speakers

1 You may decide, for example, to use an external amplifier to connect external front left and right speakers; as shown here:

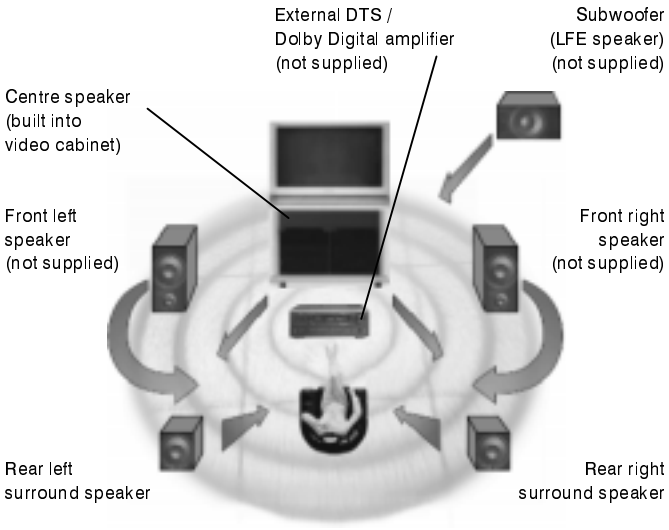


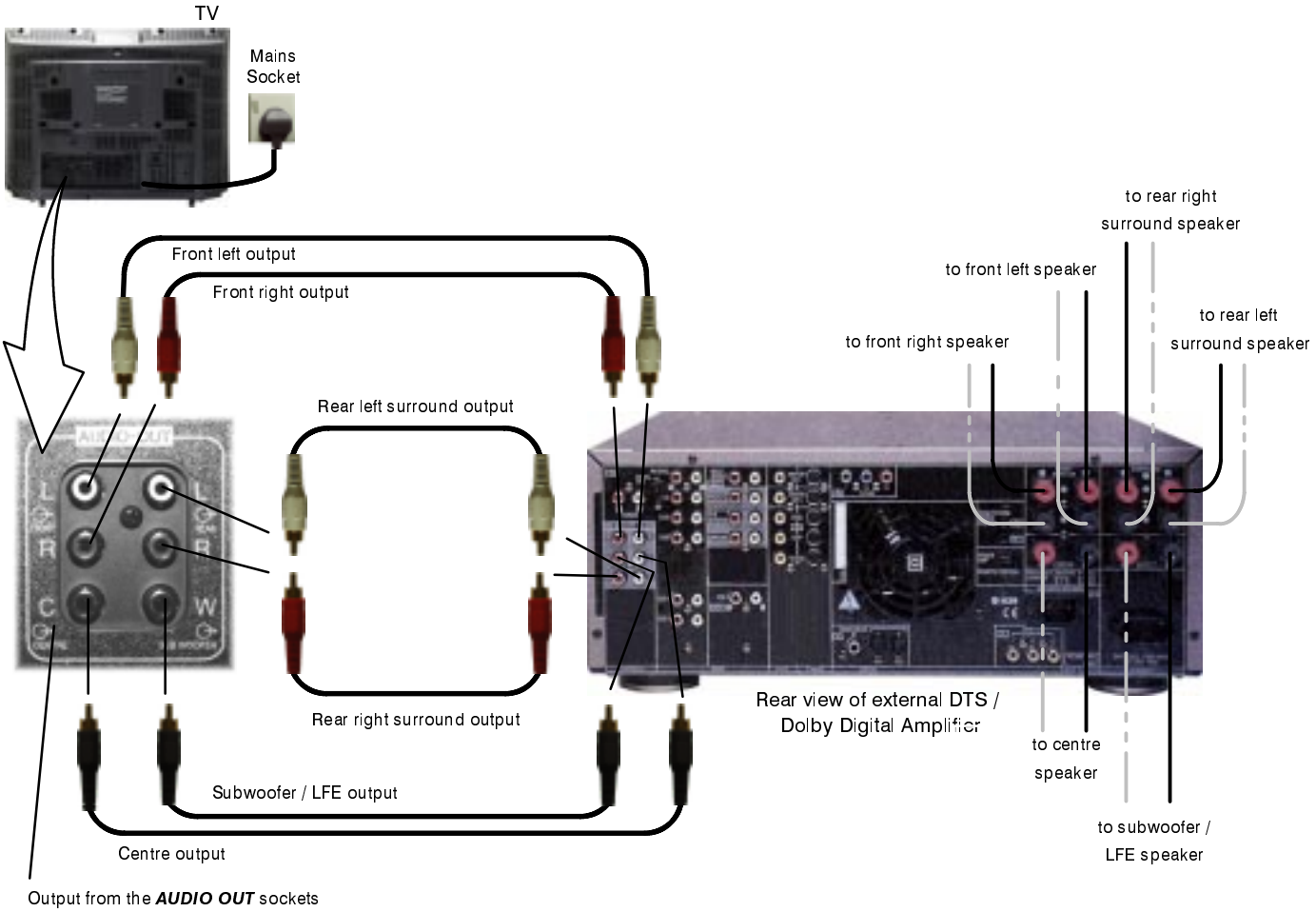


Notes:

- See the external amplifier instruction book for speaker connection details.
- Connect each output to the corresponding input on the amplifier using Phono (RCA) connectors (not supplied).

2 You may decide, for example, to use an external DTS / Dolby Digital amplifier to connect external front left and right speakers, rear left and right surround speakers (supplied), a centre speaker (supplied) and a subwoofer (LFE speaker); as shown here:


External DTS / Dolby Digital amplifier (not supplied)
Subwoofer (LFE speaker) (not supplied)
Centre speaker (built into video cabinet)
Front left speaker (not supplied)
Front right speaker (not supplied)
Rear left surround speaker
Rear right surround speaker

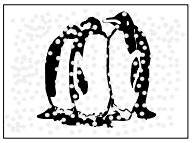
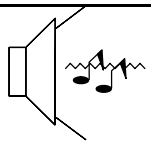
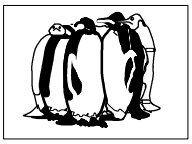
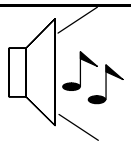
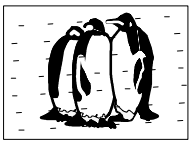
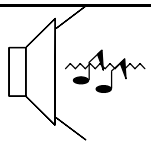
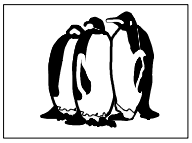
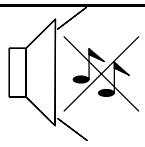
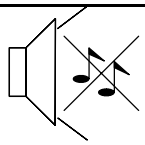
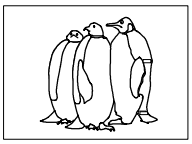
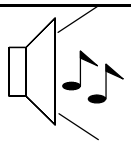
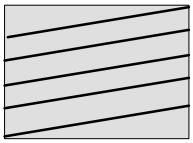
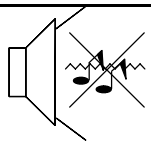
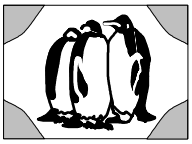
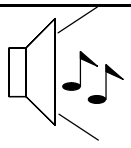
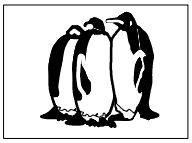
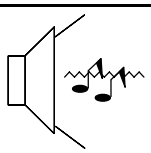

TV
Mains Socket
Front left output
Front right output
Rear left surround output
Rear right surround output
Subwoofer / LFE output
Centre output
Output from the AUDIO OUT sockets
to rear right surround speaker
to front left speaker
to front right speaker
to rear left surround speaker
Rear view of external DTS / Dolby Digital Amplifier
to centre speaker
to subwoofer / LFE speaker

Notes:

- See the DTS / Dolby Digital amplifier instruction book for speaker connection details.
- Connect each output to the corresponding input on the DTS / Dolby Digital amplifier using Phono (RCA) connectors (not supplied).

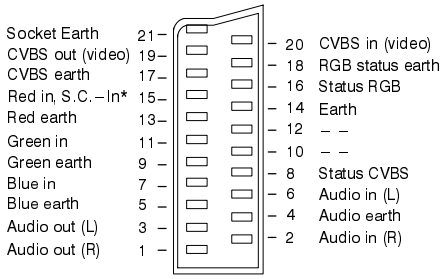
Troubleshooting

If there is a problem with your TV please refer to the table below to determine the symptoms, then carry out the suggested check. If this does not solve the problem, please contact your local Panasonic dealer, quoting the model number and serial number (both found on the rear of the TV).

Symptoms		Checks
Picture	**Sound**	
 Snowy Picture	 Noisy Sound	Aerial location, direction or connection
 Multiple Images	 Normal Sound	Aerial location, direction or connection
 Interference	 Noisy Sound	Electrical appliances Cars / Motorcycles Fluorescent lights Switch on P–NR in Picture menu to reduce picture noise
 Normal Picture	 No Sound	Volume level Sound mute switched on
No Picture	 No Sound	TV set to AV mode Not plugged into A.C. outlet Not switched on Picture / Sound controls set at minimum levels Check if in standby mode
 No Colour	 Normal Sound	Colour controls set at minimum levels
 Poor or Distorted Picture	 Weak or No Sound	Retune Channel(s)
 Coloured Patches	 Normal Sound	Magnetic Interference from unshielded equipment TV moved while switched On, switch TV off for 30 minutes. If picture is also tilted, use Geomagnetic Correction feature (see Quick Start Guide, page 12)
 Normal Picture	 Weak or distorted sound	Sound reception may have deteriorated. Switch NICAM setting (Sound menu) to Off until reception improves.

Scart and S–video socket information

AV1 / AV4 Scart socket (S–Video – AV4 only)

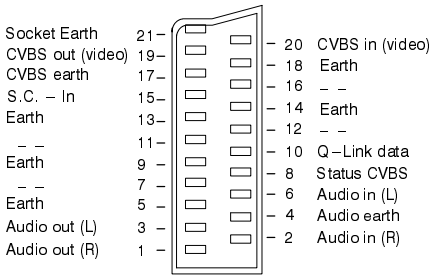


Suitable inputs for ***AV1*** / ***AV4*** include RGB (Red/Green/Blue).

*S.C.–In**** : on Pin 15 'S.C.–In' only applies to ***AV4***.

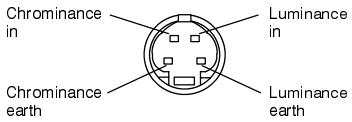
AV4 : Pins 15 and 20 are dependent on AV4 S–VHS / VIDEO switching.

AV2 Scart socket (S–Video, Q–Link)



***AV2* :** Pins 15 and 20 are dependent on AV2 S–VHS / VIDEO switching.

AV3 S–Video 4 pin socket



Specifications

		TX–36PG50	TX–32PG50
Power Source		220 – 240V 50Hz a.c.	
Power Consumption		181W	149W
Standby Consumption		2.8W	
Picture Tube Visible Diagonal		86 cm	76cm
Audio Output Music Power		Subwoofer 23W, Left / Right 20W x 2, External Centre 19W, External Surround 19W x 2, 8Ω impedance	
Dimensions	H W D	637 mm 874 mm 585 mm	576 mm 777 mm 532 mm
Weight (kg)		85	58
Receiving Systems/ Band name		**PAL I** UHF E21 - 68 **PAL 525/60** Playback of NTSC tape from some PAL video recorders (VCR) **M.NTSC** Playback from M.NTSC Videorecorders (VCR) **NTSC (AV input only)** Playback from NTSC Videorecorders (VCR)	
Aerial – Rear		UHF	
Headphones – Front		3.5mm, 8Ω impedance	
AV – Rear		**AV1** – 21 pin socket – Audio / Video in / out, RGB in **AV2** – 21 pin socket – Audio / Video in/out, S–Video in, Q–Link **AV4** – 21 pin socket – Audio / Video in / out, S–Video in, RGB in **DIGITAL AUDIO INPUTS** – Coaxial / Optical in	
Dolby Surround Out – Rear		6 x Dolby Surround Out RCA External Speaker connections – 1 x Centre, 2 x Rear	
AV – Front		**AV3 –** S–Video in, 1 x RCA Video in, 2 x RCA Audio in	

Specifications are subject to change without notice. Weight and dimensions shown are approximate.

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